the virulence of the fever began to decrease, and it subsided in March 1872. In July 1872 it appeared again in the south of the district, and by September it had spread as far as Mayūreswar in the north and Purandarpur to the west, the only portion of the district that was really free from the epidemic being the country to the west of Surī, which is higher and more sparsely populated than other parts. In 1873 there was some slight abatement of its ravages, and the year 1874 may be regarded as the last year of the epidemic, the fever being less fatal and less prevalent than in previous years. In 1875 the same facts were observed again, and what fever there was wanted the virulence of the epidemic, and had all the characteristics of the ordinary seasonal malarious fever of the country.

The causes of the fever have formed the subject of much discussion, which need not be recapitulated here. It will be sufficient to quote the opinion of the Civil Surgeon of Birbhūm, who wrote :—"I can come to no other conclusion than that the Burdwān fever was a non-contagious malarious fever, gradually increasing in severity in any given place as the malaria producing condition of the soil became more and more developed, and gradually decreasing as that condition of the soil also passed away more or less completely ; that the disease was not communicated from individual to individual or from mass to mass, but broke out successively in different places in correspondence with the progress of its steadily advancing cause." That the fever did travel is not a matter for doubt. Like a flowing tide, it touched a place one year and receded, reached it again next year with greater force and again receded, repeating this process till it had passed over almost the whole district.

During the first year of its invasion the fever was mild, and there was a simultaneous increase of the general endemic fever and a subsidence of both usual at the end of the fever season. In the second year the fever began earlier than the ordinary country fever and earlier than the epidemic fever of the previous year ; it also lasted longer and caused greater mortality. During the third year the disease was marked by still larger mortality, both from primary attacks and secondary complications, the systems of those who had survived the two previous years being now so saturated with malaria, that they had little power to resist the attacks of the fever and fell rapid victims to it. During the fourth, fifth and sixth years, six years being the average duration of the fever in any place, there was a general and slow recovery, for the fever in each successive year attacked fewer persons, was of a less fatal type, and

prevailed for a shorter period. It finally disappeared altogether in the seventh year, but left many of its victims with permanently enlarged spleens and other complications to indicate the trial which the system had undergone.

When the epidemic was at its height, the fever appeared to be most intense in large and old villages where manure and filth had accumulated for years; but it was not confined to the places where sanitation was most deficient, or restricted to villages built in low or alluvial tracts. On the other hand, it was not severe in many large villages devoid of any attempt at sanitation, which were quite as unhealthy as any of the villages where hundreds had fallen victims. No caste or class of person was long able to resist the malady. At first the rich and well-to-do, and the Doms, Háris and Bágdis, enjoyed a certain immunity, but soon the fever affected all alike. Still, in the midst of the pestilence, when hundreds were laid low, some individuals often enjoyed perfect immunity. Weak, feeble persons escaped, while strong, vigorous men fell victims in the same house. Lastly, while in some families none died, in others nearly all perished.

The symptoms did not differ from those of other malarious fevers, with the exception that there was more pronounced prostration and a greater tendency to congestion of the internal organs. In some cases the fever returned daily, in others every second or third day, but more frequently its attacks were irregular. An attack generally lasted from seven to ten days; and after a period varying from ten days to three weeks, the fever recurred and went through the same course, leaving the patient weaker than before. Then followed another interval and another attack of fever, with increasing debility and loss of appetite. At this period, probably for the first time, palpable enlargement of the spleen or derangement of the liver was observed. These attacks continued to recur notwithstanding remedial measures; and gradually, sometimes rapidly, the patient became more and more prostrated, anæmic, or dropsical, until at last he succumbed to these complications or was carried off by diarrhœa. Occasionally the lungs became affected, and more rarely cerebral congestion supervened.

Later fever epidemics.

Just as the decade 1871-80 opened with an outbreak of fever in 1871, so the decade 1881-90 began with fever in 1881 and 1882; and it is a singular fact that the next decade also began (in 1891) with a very wide and general outbreak of a distressing but not very fatal type. As regards the epidemic of 1881-82, the Sanitary Commissioner wrote in 1881:—"Bírbhúm was this year the

most unhealthy district in the Burdwān Division. The sickness was unprecedentedly great, and the mortality the heaviest ever known, exceeding that of the preceding year by 10·06 per 1,000. In fact, the disease raged as an epidemic throughout the length and breadth of the land, and the Civil Surgeon said that, from his experience of previous years, Burdwān did not fare worse in the height of its unhealthy seasons." Thānas Surī, Bolpur, Dubrājpur, Rāmpur Hāt and Nalhāti suffered the most, the mortality varying from 48·5 to 31·4 per 1,000. In the following year the epidemic was less severe, but the death-rate rose to 37·6 in the Nalhāti thāna. After that year there was a steady improvement, the decrease in the number of deaths being steady and progressive.

Since 1891 there have been no serious epidemics of fever, except in 1906 and 1907, when the district suffered from a wave of fever which steadily increased in intensity, the death-rate from fever alone rising to 38·27 per mille in 1907, and being the highest returned by any district in Bengal. In that year fever prevailed with epidemic intensity, village after village being attacked until the whole district was affected. A special enquiry was made, and it was ascertained that the increase of mortality was due to a very large extent to malarial fever of the malignant tertian type, though undoubtedly a large number of deaths were attributed to fever which were due to other causes. The fever abated in 1908, which before the breaking of the rains was an exceptionally dry year. Nearly all the tanks in the district dried up and had their bottoms excavated by the cultivators for the sake of the mud which is used as a soil-dressing. In this way the malarial infectivity of the tanks was destroyed, and infected anopheles mosquitos having nowhere to breed, died off.

Types of fever.

It is reported that the majority of the deaths returned as caused by fever are due to malarial fevers, of which the most common is the intermittent type and especially the quotidian variety. Next in order of frequency come tertian and then remittent fevers. The quartan fever is less frequent, while the double quotidian and double tertian fevers, though not unknown, are rarer still. Chronic malarial fevers with hypertrophied spleen and cachexia, as an effect of the above, are seen in many parts. Some local practitioners describe a sub-variety of remittent fever, which they call it "pernicious remittent," with diarrhœa, low muttering, delirium, prostration, coated tongue, etc. This is believed to be simply enteric fever. The records of the jail for 19 years, viz., 1887-1905, show that out of 1,125 cases ague

was present in no less than 1,059 cases, while there were 15 cases of remittent fever and 48 of influenza.

Cholera appears in a sporadic form practically every year and sometimes becomes epidemic, but from 1892, when the present system of registering vital statistics was introduced, until 1905 the mortality caused by it in any one year was not greater than 3·15 per mille, that being the maximum reached in 1894. In 1906, 1907 and 1908, however, there were serious epidemics, causing a mortality of 4·66, 5·96 and 10·17 per mille respectively. Small-pox affects a few persons at the beginning of the hot weather and during its continuance, but the records do not show any serious epidemics. Leprosy, elephantiasis and hydrocele are said to be endemic, and other common diseases are scrotal tumours, cataracts and diseases of the ear, eye, skin, digestive organs and respiratory system. Other diseases.

Leprosy is unusually prevalent, the census of 1901 showing that among males 3·2 per mille are afflicted and among females 1 per mille. In fact, this district and Bānkurā enjoy the unenviable notoriety of harbouring a greater number of lepers in proportion to the population than any other tract in India. The theory that leprosy is caused by the use of bad fish finds no corroboration in the excessive prevalence of the disease in Bīrbhūm, for very little fish is imported and it enters but slightly into the dietary of the people. Leprosy.

Vaccination is compulsory only in the municipality of Surī. There is a certain prejudice against it on the part of some people in the district, but this prejudice is growing fainter with the lapse of time. The number of persons successfully vaccinated in 1908-09 was 38,169, representing 42·71 per mille of the population, and the average annual ratio of successful operations during the previous five years was 33·36 per mille. Vaccination.

It is reported that in Bīrbhūm village sanitation is still in a very primitive state. The value of communal hygiene is not understood, tanks being polluted and rubbish allowed to accumulate promiscuously. Communicable diseases, such as small-pox, are allowed to spread without measures being taken for segregation. Cholera is treated with greater respect, the people being afraid of the disease, but no care is taken to preserve drinking water in a state of purity during its visitation. The following account, written by the Civil Surgeon 30 years ago, gives a graphic description of the insanitary conditions prevailing in the district, and this account still to a large extent holds good. "The majority of the villages are built on slightly elevated spots—these sites being chosen more on account of their barrenness than from any sanitary advantage. The soil in these villages, Sanitation.

originally gravelly, may now be said to be alluvial, and saturated with manure and filth of all kinds. In the first place, in order to manure the land, every bit of filth or cow-dung is carefully stored in a pit very near the gate or compound, sometimes inside the *bāri*, or on the side of a tank. Here ashes, sweepings, scales and bones of fish, refuse of vegetables, and other rubbish are also thrown, and at certain seasons of the year a heap five or six feet in height may be seen near every dwelling. Just before the rains, this rubbish is transported to the fields. This plan, adopted to ensure a good crop, and worse from a sanitary point of view than retention of stagnant water in the fields, has saturated the soil round about the houses until the earth may be said to be reeking with dung, and unable to absorb any more. I ask, is it surprising that fevers and other diseases cling to such localities?

"The above practice no doubt is sufficiently appalling, but it is not all. There are numerous tanks and ponds in every village, originally fifteen or twenty feet deep, but now not more than ten, owing to the deposition of animal and vegetable matter, or decay of rank weeds or leaves thrown, washed, or blown into them. These tanks contain the drinking water of the people, and the water in some of them in dry weather is actually as thick as pea-soup. The sides of these tanks and ponds are sometimes used to store manure, but oftener are resorted to by children to ease themselves. I have also on several occasions seen men and women avail themselves of convenient places to solicit nature. Human as well as animal ordure may be seen in by-lanes. The streets are narrow, and have been worn down so as to form a hollow and act as drains or waterways in the rains; and they perform this duty very effectually, for a village after a few showers looks comparatively clean. Generally the streets conduct the rain water to the tanks; occasionally the water is directed into a field.

"From the above description of a village, it will be gathered that the rain water, as it passes along the streets, carries with it quantities of all kinds of animal and vegetable matter, from human ordure, animal and fish bones, to urine, filth and decayed substances in a fine state of subdivision; all are dissolved or washed along, to be eventually deposited in the ponds and tanks from whence the drinking water is derived."

MEDICAL INSTITUTIONS.

There are three charitable dispensaries in the district giving in-door relief, viz.—(1) the dispensary at Sūrī, with seven beds for male patients and seven for female patients; (2) that at Rāmpur Hāt, with four beds for men and two beds for women; and (3) the

Lady Curzon Zanāna Hospital at Surī with five beds for women. There are also three public out-door dispensaries at Bolpur, Chellā and Nalhāti, and three private out-door dispensaries at Hetampur, Kirnahar and Lābpur, the first maintained by the Rājā Bahādur of Hetampur, the second by the zamīndār of Kirnahar, and the third by the zamīndār of Lābpur.

CHAPTER V.

AGRICULTURE

GENERAL CONDITIONS.

THE western portion of the district consists of undulating uplands broken up by wedge-shaped depressions, which receive detritus from the high lands that hem them, and have a plentiful supply of water from the drainage of the slopes. Rice is grown in these depressions and in terraces up the slopes, but the crests of the ridges, being composed of a sterile laterite soil, do not admit of its cultivation. Generally, the surface for a few feet in depth is occupied by a red soil derived from the decomposition of the solid laterite lying below, but frequently the rock crops up in large masses. In the east of the district the land is low and of alluvial formation. The soil is mostly a light sandy loam, which is enriched in some cases by detritus from the uplands and sometimes by silt from the overflow of the rivers which traverse this part of the country. As a rule, however, these rivers, when in flood, only deposit sand, and embankments have been built in many cases to protect the area under cultivation from its drifts. *Aman* or winter rice is the most important crop of the district, the bulk of the cultivable land being reserved for it. The only other crop of importance is *âus* rice, for other *bhadoi* crops are but little grown, while *rabi* crops occupy a very small area, mainly in the Nalhâti and Murarai thânas.

CLASSES OF LAND.

Land, as distinguished from soil, is divided into 13 classes, viz.—(1) *do*, (2) *sunâ*, (3) *sâli*, (4) *ola* or *olan*, (5) *jodângâ* or *dângâ*, (6) *pat-jami* or mulberry land, (7) *jangal bhûmi*, (8) *pâner baraj*, (9) *ghâs*, (10) *sarbera*, (11) *bâstu*, (12) *salghor* and (13) *patit*.

Do land.

Do land has a rich soil, on which *âus* or autumn rice is generally grown, besides gram, *masûri*, peas, wheat, linseed, *khesâri*, *til*, sugarcane and occasionally cotton. There is thus a great choice of crops and small risk of total failure. *Do* lands are subdivided into three classes—*awal*, *doem* and *soem*, *i.e.*, first, second and third class. First class lands are cultivated with *âus* rice, which is cut in September or October. The land is then manured and ploughed, and cold weather crops are sown broadcast, *e.g.*, gram, wheat, *masûri*, linseed, *khesâri*, peas and mustard. When the cold weather crop has been taken off the ground, the land, after being again manured and ploughed, is sown with *til*. When

this has been reaped, the time for sowing rice has come round again. Sugarcane is also grown on *do* land.

Second class *do* land is not so easily irrigated as the first class, and is also inferior in yield. The same crops may be grown on it as on the latter, or, instead of the cold weather crops above mentioned, either onions or garlic, after which a crop of *kāshta til* may be raised. The latter has a seed somewhat larger and lighter in colour than that of *krishna til* or black *til*. *Soem do*, *i.e.*, *do* land of the third class, resembles *do* of the second class, but is inferior both in yield and in point of irrigation.

Sunā lands differ from *do* lands in having a smaller amount of moisture and in being unsuitable for the cultivation of sugarcane. Other crops that grow on *do* lands also grow on *sunā* lands, but the quantity of produce is smaller and the cost of cultivation greater. *Sunā* lands are subdivided into (1) *sunā korpa* or *awal sunā*, (2) *dāem sunā* and (3) *soem sunā*. Sunā.

Sāli lands are similarly subdivided into (1) *jol* or *awal*, (2) *doem* and (3) *soem*. First class *sāli* land consists of moist muddy land which will bear three crops in the year, viz., a crop of *āman* rice, a crop of *khesāri*, and a crop of *kāshta til*. The *āman* is sown in March and April, and is reaped in November and December. *Khesāri* is sown among the rice as it begins to ripen, and is cut in February and March. *Til* is sown about the middle of March, and ripens early in May. The best *sāli* land lies a little lower than that of the second class, and therefore, when rain falls, gets all the silt of the higher levels; it is also easier to irrigate. *Sāli* land of the second class yields two crops, *āman* rice and *til*, the outturn being about one-third less. Third class *sāli* land is situated still higher, and the yield of rice is less than that of second class and about half that of first class *sāli* land. Sāli.

Jedāngā or *dāngā* is a high poor land found near homesteads and also in the open plains; *nīras* or juiceless is the word used to describe it. It is difficult of irrigation, and bears but one crop in the year, either *arahar*, *san* or Indian hemp, and *baigun* or brinjals. Orchards or groves of mango, jack and other fruit trees are also found on this land. Jedāngā.

Olan or *ola* land is land covered with silt along the river banks. It is very fertile, but liable to inundation, as its name (*olan*, meaning low) indicates. It is generally devoted to the growth of cucurbitaceous plants, such as *tarmuj* or water melon, *kānkur*, *lāu* or gourd, *uchhe*, *karalā* and *khero*, a species of gourd very common in this district. Olan.

Pat-jami or mulberry land is of two kinds, known as *dihi tut* and *māthāl tut*. The first is high land near the village, which Pat-jami.

is particularly favourable to mulberry cultivation, and the second is high land in the open away from the villages, which is said to be not so strong as *dihi ivt*. Near Ganutiā, on the bank of the Mor, mulberry is grown in *paiwasti* or *media*, *i.e.*, alluvial lands, which are said to be the best of all as they do not require manuring.

Jangal bhūmi. *Jangal-bhūmi* are lands reserved for the growth of *sāl* trees. When the *sāl* trees get old, they are cut and sold for timber, and young shoots sprouting from the roots of the old trees are again reared. The trees are sold standing as well as after being cut. A large number of trees are also cut when young and sold for fuel.

Pān-baraj. *Pān-baraj* is land on which betel grows. *Methel* land, *i.e.*, land mostly composed of clay which keeps continually moist, is best suited for its cultivation, and banks of tanks and marsh lands are selected for the purpose.

Ghās lands. *Ghās* is reserved grass land, and is subdivided into *kāti ghās* *i.e.*, places whence grass is cut for fodder, and *charai ghās*, *i.e.*, pasture land.

Sarbera *Sarbera* are sandy lands, generally on river banks, where the *sar* reed grows wild This reed is used for thatching and also for preparing *pāner-baraj*, *i.e*, shade for betel plants. Grass sometimes grows in *sarbera* lands in places where there are small deposits of mud, and such lands are used for pasture.

Bāstu. *Bāstu*, *i.e.*, homestead lands, are divided into *nyābāstu* and *udbāstu*. *Nyābāstu* is land on which the house stands, and *udbāstu* is land about the homestead. The latter is again subdivided into *tarkāribāstu*, *i.e.*, the lands within the courtyard, and *saribāstu*, *i.e.*, lands lying about the enclosed part of the house. Cucurbitaceous plants, such as pumpkins and gourds, are planted in *tarkāribāstu* lands and are trained on the thatching of cottages. A few chillies, plantains, brinjals, *karalā*, *uchhe* and *dangli* are grown on *saribāstu* land, but the greater portion of it generally lies fallow. While almost all the villagers have *tarkāribāstu*, few have *saribāstu* land.

Salghar. *Salghar* is fallow land on which huts are raised and mills are erected for storing and pressing sugarcane and for boiling the juice into *gur* or molasses.

Patit-jami. *Patit-jami* or fallow lands are subdivided into the following classes:—(1) *Shābek patit* or *dāngā patit* is land always left waste, for which no rent is ever paid. Generally it is the highest land of all and consists of stiff clay or laterite. (2) *Hāl patit* or *fasal patit* is land which, having been cultivated, lies fallow. Such land may have been left uncultivated owing to deposits

of sand; or it may be of so high a level, or so situated in regard to water, as to make irrigation too expensive, and is therefore only worth bringing under cultivation in years when there is a plentiful rainfall. Rent is nevertheless paid for such land according to its class, unless the zemīndār allows the ryot to relinquish it or unless the ryot chooses to relinquish the whole of his holding. (3) *Rosad patit* is fallow land which, though included in a ryot's holding, is not assessed to rent. Such lands are generally included by the zamīndār in a ryot's holding with the object of keeping up an exercise of possession in them and of barring the acquisition by others of rights by prescription or limitation. (4) *Gochar patit* is common pasture land, consisting of small plots of common attached to the village and yielding poor herbage. This land belongs to the landholders, who do not charge their ryots rent for grazing their cattle upon it.

The following is an account of the soils of the district: *Metel* is a clay soil retentive of moisture, which is best suited for growing winter paddy, sugarcane, wheat, gram and *kalai*. *Entel* (literally sticky) is a brownish clay, which becomes very sticky when wet, and gets hard and cracks in long fissures on drying. It is a poor soil, capable of producing paddy only if manured, and will not grow *rabi* crops even with irrigation. *Bāga-entel* (literally, *entel* having the colour of a tiger) is a reddish soil, sticky and tenacious, which contains limestone nodules. It becomes very hard when dry, and is retentive of moisture for a longer period than any other soil. Like *entel*, it is a poor soil capable of producing paddy only if manured. *Pali* is a deposit of silt in the bed of a river, loose, friable and yellowish in colour. It is a very rich soil, and is well suited for sugarcane, wheat, gram, potatoes, cabbages and other vegetables. Not much paddy is grown on *pali*, as it is generally reserved for more valuable crops. It will grow *rabi* crops even without irrigation, and provides an excellent earth for pottery. *Reti* or *ret* is generally a synonym for *pali*, but sometimes the term is reserved for a lighter variety of *pali*. It is a reddish, loose and friable alluvial soil. It does not grow rice and is best suited for vegetables, wheat, barley, etc. It is a moist soil which will grow *rabi* crops without irrigation. SOILS.

Bindi is a sandy soil which improves with continued cultivation. It is reddish, loose and friable, but not retentive of moisture; it is a poor soil capable of producing paddy, and will also grow *rabi* crops if irrigated. *Doānah* is a mixture of clay and sand, forming a blackish, loose and friable soil, not very

retentive of moisture. It is a rich soil, suitable for all sorts of crops—indeed, in some places *doānsh* is held superior even to *metel*. For *rabi* crops, however, it requires irrigation. *Bele* is a whitish, loose and friable soil, not retentive of moisture. It is a poor soil suited only for paddy and vegetables, and will not grow *rabi* crops even with irrigation. *Kankare* (literally gravelly) is a reddish, loose and friable laterite soil containing ferruginous concretions. It is a poor soil, capable of growing *bājrā*, maize, *kurthi*, peas, *maruā* and *gondli*. It will also grow *rabi* crops with irrigation, and the jack tree does very well in it. *Bāstu* (literally, homestead land) is largely used for *rabi* crops. It is a blackish friable rich soil, which is manured with cow-dung, ashes and other refuse from the village. It is not retentive of moisture, but is well suited for paddy, sugarcane, wheat, peas, linseed, *til*, tobacco, maize and *bājrā*.

IRRIGATION. The district having, for the most part, a porous soil and rapid drainage, artificial irrigation is necessary in years of scanty rainfall, especially for rice grown on terraced slopes. When the rainfall is ample and seasonable, there is little need of it, for the cultivators divide their fields into numerous little plots and enclose each by a raised bank which retains the rain water. Each plot is thus a small reservoir, and the lower fields can be irrigated by letting water into them from those at a higher level. Well irrigation is not practised except in the case of garden produce, and tanks are the most usual source from which the fields are watered. Several of these tanks are old and of large size, *e.g.*, the Dantindighī one mile from Dubrājpur, the Raipur-Sair four miles south of Surī, and the Lambadarpur Sair a mile north-west of the same place. Smaller tanks are very numerous, and it has been estimated that each village has at least five on the average. In the village of Sankarpur, for instance, there are 111 tanks occupying 167 acres, and 46 are so close to each other, that mere footpaths on the top of the banks separate one from another. Owing, however, to the neglect of the zamindārs (many of them absentees) and the apathy of the population at large, many of the irrigation tanks have silted up and become useless; some of them have become so dry that they are let out for cultivation.

Water-lifts. When the tanks are full, water is let into the fields through a cut in their banks. When the water is low, the cultivators raise it by means of the *dheni*, or swing basket, or by an instrument called *dāuni*. The former is merely a scoop made of matting with ropes attached to its four corners. It is worked by two men, each of whom holds two of them; after dipping the scoop in

the water, they tilt its contents into the channel leading to the field to be irrigated. The *dhauni* or *drauni* consists of a trough with a bend in the middle, or rather towards one end, the two portions of the trough being of unequal length. The shorter end is closed, and is called the *ānkrā*. The whole moves upon a pivot; and to the end of the *ānkrā* is attached a rope, which is fastened to one end of an elevated lever, the other end of the lever bearing a counter-balancing weight. The *ānkrā* is dipped into the tank, and when filled, the weight is released and drags up the closed end, pouring the water through the open end of the trough into the irrigating channel. Irrigation by the *teura*, a kind of Grecian lever, is also common. The *do* fields on the banks are largely irrigated by this means, the crops for which the *teura* is used being sugarcane, oil-seeds, flax and vegetables.

PRINCIPAL CROPS.

The following table shows the normal acreage of the principal crops and their proportion to the normal net cropped area according to statistics prepared by the Agricultural Department.

Name of crop.	Normal acreage.	Percentage on normal net cropped area.
Winter rice	604,600	77
Sugarcane	9,000	1
Total *aghani* crops ...	613,600	78
Autumn rice	144,100	18
Jowār	100	...
Indian corn	1,900	..
Other *bhadoi* cereals and pulses ...	200	...
Other *bhadoi* food-crops	1,400	..
Til (*bhadoi*)	500	..
Other *bhadoi* non-food crops ..	2,800	...
Total *bhadoi* crops	151,000	19
Wheat	5,000	1
Barley	800	...
Gram	7,000	1
Other *rabi* cereals and pulses ...	3,500	...
Other *rabi* food-crops	1,000	...
Linseed	800	...
Rape and mustard	2,000	...
Til (*rabi*)	400	...
Other oil-seeds	200	...
Other *rabi* non-food crops	700	...
Total *rabi* crops ...	20,900	3
Orchards and garden produce ...	25,000	3
Twice cropped area ...	28,900	3

The most noticeable point brought out by these figures is the predominance of rice, on which the cultivators almost entirely depend.

EXTENSION AND IMPROVEMENT OF CULTIVATION.

The area under cultivation has been greatly extended during the last half century by the Santals, who have reclaimed large tracts of jungle in the west of the district. According to the returns for 1907-08, the net cropped area is 650,900 acres. Current fallows account for 243,460 acres, culturable waste other than fallows occupy 90,000 acres, and the area not available for cultivation is 136,920 acres Of recent years much has been done to improve the methods of cultivation by the institution of the Surī Cattle and Produce Show, which is managed by a committee of local gentlemen under the presidency of the Collector, and has been held annually for the last 13 years. At this show prizes are given for local agricultural produce; and approved seeds and manures, as well as modern agricultural implements, are brought to the ryots' notice. A District Agricultural Association has also been started, the members of which have experimented with different crops, *e.g.*, varieties of cotton, *samundrabali* paddy, Central Provinces *āus* paddy, English vegetables, Muzaffarnagar wheat, and ground-nuts.

CATTLE.

Oxen and buffaloes are used for agricultural purposes, sheep are reared for purposes of trade, and goats and pigs for local consumption. Besides doing plough work, bullocks are used as beasts of burden, for drawing carts and carrying packs of grain or other merchandise; they are also yoked in the oil-mills. Buffaloes are occasionally sold for purposes of sacrifice at the Durgā and Kālī Pūjās, but otherwise they are kept merely for ploughing or for their milk. Horses, ponies, and asses are very few in number. The goats and sheep are of an indigenous breed and are mostly kept by Muhammadans. The he-goat is a frequent victim at Hindu *pūjās*, and his flesh is eaten. Musalmāns eat the flesh of she-goats, and also, to some extent, mutton. Pigs are kept by Hāris, Doms, Bauris and other very low castes, for their own eating.

The local breed of cattle is poor, in spite of the attempts made to improve it, for the cultivators and graziers give very little care or attention to breeding. Since the establishment, however, of the Surī Cattle and Produce Show, and of a dairy farm at Surī, they have begun to take more interest in this important matter. Some Hissar and English bulls have also been imported by the District Board and the Surī Cattle Show Committee for the improvement of the local varieties; and a veterinary dispensary has been opened at Surī.

There is a growing difficulty in finding good pasturage for the cattle owing to the extension of cultivation, and grazing grounds are scarce in the east of the district. Here practically the only grazing lands are small plots of common near the villages which yield a poor and scanty grass No rent is charged for the right of pasturage over them, and there is a tacit understanding that they shall be reserved for this purpose by the zamīndār. These commons and the chance herbage found in uncultivated and uncultivable land, on the tank banks or the raised boundaries of the fields, and the stubble left in the rice fields, provide all the grazing of plough cattle, and have to be supplemented by fodder consisting of rice straw. In the west there are still pasture lands on the uplands, but the *sāl* forests in which the cattle used to graze have mostly been cut down.

CHAPTER VI.

NATURAL CALAMITIES.

EARLY FAMINES.

BIRBHUM is not liable, in any marked degree, to famine or flood, and no drought or inundation has occurred during the experience of the present generation on a scale sufficiently large to affect its general prosperity. This immunity from famine is largely due to the fact that the means of transit are sufficient to prevent the danger of isolation in the event of a local failure of the crops, and to avert widespread suffering by importation from other districts. The old records show, however, that formerly Birbhūm frequently suffered from droughts and failure of the harvests. As already stated in Chapter II, it was devastated by the famine of 1770, more than one-third of the cultivable land being returned as deserted in 1771, while in 1776 four acres lay waste for every seven that remained under cultivation. In 1791 the crops suffered so severely from drought, that the Collector recommended a suspension of revenue to the extent of nearly Rs 60,000; and, to avoid such disasters, large *golās*, or granaries of rice, were erected near Surī. This expedient having proved a failure, the 18 *golās* which had been built were sold in 1796 for Rs. 200, and 26,000 maunds of rice and 600 maunds of paddy for less than Rs. 9,000—a heavy loss, for the price of rice was nearly Rs. 2 per maund. In 1800, and again in 1803, there was drought owing to a failure of the rains, that of 1803 being described as "an extraordinary drought." The prices were so high, that the Collector, Mr. R. Thackery (father of the novelist), proposed a special enquiry to ascertain how much grain the district could properly export and then to have the remainder sold at fixed prices. Distress also prevailed in 1829 and 1837, the price of rice in the former year rising from 50 to 36 seers per rupee.* The district suffered again from scanty rainfall during the years 1865 to 1867, and in 1866 the maximum price of common rice was 8 seers per rupee.

FAMINE OF 1874.

The famine of 1874 was severely felt in Birbhūm, which had already suffered from several bad seasons and from the epidemic

* R. G. Drake-Brockman, *Notes on the Early Administration of Birbhum.*

of fever known as Burdwān fever. The weather during 1872 was unseasonable, the rainfall during the ploughing season being very scanty. The rice crop was, therefore, a short one, except towards the east, where the rainfall was greater than in the rest of the district, and where irrigation is more general than in the western parts. It was not from unfavourable harvests alone that Bīrbhūm suffered in this antecedent period, for the Burdwān fever, which had for some time previously afflicted Bīrbhūm in common with the neighbouring districts, assumed in 1872 a more virulent type and invaded a wider area. Next year the rainfall in Bīrbhūm was normal in quantity, but very abnormal in distribution. The usual rainfall in May and June is nearly 11 inches, but in those two months only 5 inches fell. In July the normal fall is 13 inches; in July 1873 almost double that quantity fell. Instead of an interval of fine weather after such heavy rain, there were 17·50 inches in August 1873, *i.e.*, 5 inches more than usual. Finally in September and October, when abundant moisture is wanted, not more than about 4½ inches fell instead of a normal fall of about 14 inches. The rainfall in Bīrbhūm in 1873 affords a striking example of how sufficient moisture may be neutralized by unseasonable distribution.

The effect of this abnormal weather on the harvests varied with the crops and the localities in which they were raised; but in December 1873 the Collector, summing up the results of the harvest, stated that in the district as a whole there had been nine-sixteenths of an average autumn (*āus*) rice and three-eighths of an average winter rice (*āman*) harvest. The premature cessation of the rains also affected the cold weather crops, the cultivators being unable to till the parched lands. Thus, a serious failure of the rice crops was succeeded by an almost total failure of the cold weather crops, viz., wheat, mustard, oil-seeds, etc.—a failure absent from the scarcity of 1865-66, which did not affect the later crops. The effect of this deficiency was soon reflected in the markets. In the early months of normal years the price of rice, which is the main article of diet in this district, had previously been about 27 seers for the rupee; but prices began to rise in September 1873, and in the beginning of 1874 rice sold at double the usual rate. The effect of high prices and diminished supplies first showed itself in Bīrbhūm, as elsewhere throughout the distressed area, in the contraction of private charity and appeals by the mendicant classes for public relief. This occurred early in the year, and was followed in March 1874 by want among the labouring classes to whom the failure of the crops meant the denial of harvesting employment, by which they in a great measure subsist.

As the hot weather wore on, the prospect became still more gloomy. On the 8th May the Collector reported:—"The position has been sensibly altered for the worse. Pauperism and crime have increased, the cultivators are being reluctantly forced on the relief works by distress; cholera and small-pox are ravaging the district. Rice is not procurable in many villages at market rates, though still to be had without difficulty in the principal marts." The distress was greatest in August, when there were at one time 38,321 persons in receipt of charitable relief and 9,866 on relief works. Next month the price of rice reached its highest rate, viz., 11½ seers per rupee, and after that it gradually fell. Throughout the scarcity, however, there was no actual failure of the markets, the district continuing to export grain up to August. Indeed, the exports of food grains during the 12 months ending in September 1874 exceeded the imports by nearly 1,400 tons, though the imports included some 3,000 tons sent by Government for the purpose of relief.

Charitable relief began in the end of February, but in the end of March only 683 persons were being gratuitously fed. The number rose to 3,600 in the beginning of May, to 9,801 by the end of that month, and to 18,014 in the end of June. In August and September between 30,000 and 40,000 were in daily receipt of charitable relief. In all, 1,725 tons of rice were gratuitously distributed, 800 tons advanced on loan and 1,004 tons paid as wages. At the same time, Rs. 49,456 were expended in charitable relief, Rs. 64,809 in wages, and Rs. 61,615 advanced on loan. Labourers employed on relief works numbered on a daily average 3,846 in April, 8,054 in May, 10,352 in June, 6,655 in July, 7,826 in August, and 5,194 in September. Relief operations ceased in the end of October, with the incoming of the rice harvest, for fortunately the rainfall was both seasonable and abundant. In November-December the harvesting of *áman* rice caused prices, which had steadily kept up to abnormal rates till then, to fall rapidly, and they resumed their normal standard at the end of December.

SCARCITY OF 1885.

In 1885 there was again scarcity necessitating relief measures in some parts of the district, which had suffered from an unfavourable distribution of the rainfall in 1884. The rainfall was abundant in June, July and August of that year, and there was every prospect of a bumper crop. In September, however, it was very scanty, and in October, when it was most wanted, there was practically no rain at all. In more favourable localities the *áus* crop was sufficiently advanced to yield a 12 annas harvest instead of the 16 or 18 annas hoped for at first; but on the high lands

cultivated by the Santāls an outturn of only 2 annas was obtained. They were recompensed, however, by an excellent crop of maize. Elsewhere the outturn of the *āus* crop lay between these two extremes, and was estimated at 5 annas of an average crop in the Rāmpur Hāt subdivision and at 6 annas in the Suri subdivision. The outturn of the *āman* crop depended entirely on the facilities for irrigation, and the yield varied from 4 annas, where irrigation was impossible, to 12 annas, wherever sufficient water from tanks or streams was available. The Rāmpur Hāt subdivision fared worse than the Sadar subdivision, the average outturn in the former being estimated at 7 annas, and in the latter at 8 to 9 annas. The outturn of *āman* for the whole district was 8 annas only.

In September 1884 distress began to be felt in many parts of the district, especially in thāna Nalhāti, round Shahpur, and to the south-east of Surī. Towards the end of the year, when the *āman* harvest was going on, the pressure was relieved; but in 1885 distress gradually became acute as the year advanced, and it was found necessary to undertake relief operations. The late advent of the monsoon caused no little anxiety, but fortunately the rains, though late, were plentiful and seasonably distributed, and by the 19th November 1885 all relief operations were brought to a close. The area and population of the affected tracts are shown in the margin.

	Area in square miles.	Population.
Nalhāti ..	110	55,000
Murarai and Rajgāon	24	12,000
Rāmpur Hāt ...	30	15,000
Shāhpur ...	42	21,000
Ilāmbazar	28	14,000
Ganutiā ...	24	12,000
Total ...	258	129,000

Charitable relief was started in March 1885, and the daily average number in receipt of relief in the latter end of June was 14,340, of whom 5,841 were relieved by private agencies. Relief works were opened, the total expenditure amounting to Rs. 18,530. Government also spent Rs. 22,297 on charitable relief, so that the total amount spent by the State was Rs. 40,827, besides Rs. 9,561 raised by public subscription. The efforts of the Government officers were supplemented by private associations. The two principal associations engaged in relief work were Calcutta bodies, viz., the Sādhāran Brāhmo Samāj, with a temporary head-quarters at Nalhāti, and the Indian Association, with head-quarters at Nawādā, 8 miles east of Nalhāti. In the Rāmpur Hāt thāna two local associations, the Sadbhāb Uddipani Sabhā and the Hari Sabhā, also assisted in the work of charitable distribution.

FLOODS. Widespread floods are uncommon, but excessive rain sometimes causes serious inundations from the river Ajai, Hingla, Mor, Bānsloi and Brāhmanī. Formerly such inundations appear to have been both numerous and disastrous. In 1787 there was a high flood which, it is said, in some places "swept off villages, inhabitants and cattle, the crops on the ground, with everything that was movable." We again read of a sudden and extraordinary rise of the Mor and Ajai rivers in 1806, when the floods washed away whole villages, "destroying many cattle and much property of the inhabitants, several of whom lost their lives." In this year the rivers rose on the 28th September and inundated the country, so that on their banks there was not a hut to be seen. The people climbed trees and remained there during the night of the 28th and the whole of the 29th and 30th. Large tracts of land were laid waste and covered with sand several feet deep. The value of property destroyed was over 1½ lakhs of rupees, while nearly 24,000 *bighās* of land were thrown out of cultivation.*

The most serious flood in recent years was that which occurred in September 1902. This flood was caused by the heavy rain of the preceding twenty-four hours, which caused the Brahmanī in thāna Murarai, the Bānsloi in Nalhāti, and the Mor in thāna Surī to rise rapidly and, overflowing their banks, inundate the surrounding country—in some places to a depth of 10 to 12 feet. The Mor flooded the road to Muhammadbazar, destroyed the masonry bridge over it, and damaged several villages on its north bank. The villages near the railway line in the neighbourhood of the Brāhmanī and Bānsloi were washed away by the rush of water, as the floods could not force their way through the narrow openings allowed in the bridges of the railway embankment. The line was breached in several places between Nalhāti and Murarai, and through traffic was suspended. Great loss was caused to cultivators in the four thānas of the Rāmpur Hāt subdivision, and more especially Nalhāti and Murarai. Nearly 136 villages were more of less damaged, 800 houses were washed away, and 1,800 more were damaged.

CYCLONES. Cyclones are rare in this district, which apparently lies off their regular track. The cyclone of 1874, which worked havoc in other parts of the Burdwān Division, was only slightly felt here. At Surī isolated groups of trees were attacked and blown down, as if they had come under a cannonade, while other groups of trees close to them were uninjured. The only other cyclone

* R. G. Drake-Brockman, *Notes on the Early Administration of Birbhum*.

calling for mention occurred in June 1902. It passed through the Rāmpur Hāt subdivision, and derailed the up-passenger train between Rāmpur Hāt and Nalhāti at a distance of 1½ miles from Rāmpur Hāt. The train was wrecked, several passengers lost their lives, and others were injured.

The earthquake of the 12th of June 1897 was felt in this district, but it caused very little injury, only a few of the public buildings and some private residences being cracked. EARTHQUAKES.

CHAPTER VII.

RENTS, WAGES AND PRICES.

CASH RENTS.

THE rates of rent paid in cash vary according to the class of land under cultivation, and the following are reported to be those current in different parts of the district: In thāna Surī the rent of ordinary rice land is Rs. 3 to Rs. 9 per acre (Re. 1 to Rs. 3 per *bighā*), while that of the best quality of land yielding sugarcane and other valuable crops is Rs. 9 to Rs. 12 per acre. Near Rāmpur Hāt the rent for rice land is, on the average, Rs. 6 per acre, and for the best lands producing sugarcane and other crops Rs. 9. Near Mallārpur from Rs. 3 to Rs. 6 per acre is obtained for rice land, from Rs. 7 to Rs. 8 for sugarcane lands, Rs. 15 for land growing vegetables, and Rs. 80 per acre for *pān* (betel-leaf) plots. Near Sainthiā rice land pays a rent of Rs 6 to Rs. 9 per acre, and in thāna Dubrājpur the prevailing rates for such lands are Rs. 3 to Rs. 9 per acre. Near Ilāmbazar, in the south of the district, the prevailing rates are the same as at Dubrājpur, but recently assessed *dāngā* (high) lands of the lowest quality bear a rent of 8 annas to 12 annas per *bighā* or Re. 1-8 to Rs. 2-8 per acre. In some parts of the district the rent rate is as low as 4 annas to 6 annas per *bighā* for high lands growing maize or *kodo*.

PRODUCE RENTS.

Ryots who do not personally till their lands, sublet either the whole or a part to cultivators or labourers on a system of produce rents. One common form of this system is that known as *krishāni jot* or *hāl krishi krishāni*, in which the ryot supplies the seed, manure, ploughs, cattle, etc., required for cultivation, and the *krishān* is a labourer who tills the fields being remunerated by a third of the produce; the ryot gets the other two-thirds and all the straw. This, however, would perhaps be more properly described as a form of labour contract rather than as an under-tenure. There are four forms of the produce rent system proper, viz.—(1) *ardha bhāg jot*, (2) *athāra-baisa jot*, (3) *pānch-ardha jot*, and (4) *thikā jot*. Under the *ardha-bhāg jot* (or *bhāg jot*) system half the produce goes to the ryot who lets the field, and the other half and all the straw are retained by the lessee, who bears all the cost of cultivation. The *athāra baisa* system is the same, except that the under-tenant's share of the produce is $\frac{11}{18}$ths and the

lessor's $\frac{11}{16}$ths. Under the *pānch-ardha* system the lessor provides manure and the actual cultivator retains $\frac{3}{4}$-ths of the grain and $\frac{1}{4}$th of the straw, the remainder being paid as rent. Under the *thikā jot* system the cultivator meets all the expenses of cultivation and is bound to pay a fixed amount of paddy or rice as rent to the superior holder. The latter is free from all risks, such as bad seasons, and the cultivator has to pay the amount fixed whatever may be the outturn.

SETTLEMENTS OF RENT.

No general settlement of rents has been carried out in the district, but some private estates have come under survey and settlement. Among recent rent settlements may be mentioned that of Mallārpur in thāna Mayūreswar and of Hukmapur in thāna Surī, which took place in 1893-94. The maximum, minimum and average rate per acre for wet cultivation was Rs. 6, Rs. 3 and Rs. 4-8 respectively, and for dry cultivation Rs. 4-8, Rs. 3 and Rs. 3-8 per acre respectively. The assessment for Sāntal ryots was nearly half of that of the Bengali ryots, excess land held by the latter being assessed at the rate of Rs. 2-8 to Rs. 3-12 per acre, while the rate fixed for the former was from Re. 1-4 to Rs. 2-8 per acre.

In 1899-1900 the *ghātuāli* service lands were resumed, the average rental assessed ranging from Re. 1 to Rs. 4-8 per *bighā* of rice land The average assessment per *bighā* of the *chaukidāri chākrān* lands transferred to zamīndārs was from Re. 1 to Rs. 3. More recently three private estates, Dubrājpur, Shallampur and Kendgoria, have been settled under the Bengal Tenancy Act.

WAGES.

The following table shows the daily wages paid for different classes of labour in 1895, 1900, 1905 and 1909:—

Class of labour	1895.	1900.	1905.	1909.
	As. P.	As.	As.	Rs. A. P.
Common mason ..	5 0	6	8	0 8 0
Superior ,,	10 0	10	10 to 12	0 10 0 to 0 12 0
Common carpenter	5 0	6	8	0 8 0
Superior ,, .	10 0	10	12	1 0 0 to 1 4 0
Common blacksmith	5 0	6	8	1 0 0 to 1 4 0
Superior ,, ..	10 0	10	12	1 8 0 to 2 0 0
Male adult cooly	4 0	4	4	0 4 6
Female ,, ,, ...	1 6	2	2	0 2 0 to 0 3 6

It is somewhat interesting to compare the present rate of coolies' wages with that current in 1809, when one anna a day was the labourer's hire.

Agricultural labour is generally not paid in cash but in kind, the cultivator employing labourers by the year, who work his land under his supervision. At the time of harvest these labourers are given one-third of the produce *minus* the advances they have received, this system being known as the *krishāni* system. The village artisans are also paid in kind, and generally have a regular clientele. Each of their customers calls them in for any job for which they are wanted and pays them a fixed quantity of grain a year, generally 30 seers or 1 maund of paddy. There is one class of servants kept in Muhammadan families whose condition is very low. They consist of orphans and their children who have been rescued from want and brought up in the house; they are called *khānejad gulām* if male, and *khānejad bāndi* if female. A *gulām* ranks lower than a paid menial servant, can only marry a *bāndi*, and when eating, is not allowed to seat on the same cloth with any one but a *gulām*.

PRICES. The following table shows the prices (per standard maund of 40 seers) of common articles of food in selected years during the last 120 years:—

	1788.	1872.	1886.	1908
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Finest rice ..	1 9 0	1 9 0	2 1 3	10 0 0
Fine ,, ..	1 3 6	1 5 10		8 0 0
Common ,, ..	1 0 9	1 4 5	1 13 4	5 0 0
,, paddy .	0 7 11	0 13 3	0 12 0	2 8 0
Kalai	1 15 9	1 11 4	1 9 0	5 0 0
Salt	4 8 10	4 7 0	3 2 4	1 15 0
Oil	8 11 10	15 9 6	15 0 0	25 0 0
Ghi	12 2 3	27 5 2	28 0 0	40 0 0
Sugar ..	6 13 3	10 14 8	9 12 0	10 0 0

MATERIAL CONDITION OF THE PEOPLE. According to a report submitted by the Collector in 1907, the average holding of a cultivator in Birbhūm has an area of 15 *bighās* and a rental of Rs. 22-8 per annum. In an ordinary year his land yields about 180 maunds of paddy, one-third of which goes to meet the cost of cultivation, including seed, the purchase of cattle, the wages of any labour that may be required for cultivation, as well as the rent due to the superior landlord. The remaining 120 maunds go to the support of himself and his family. He also gets about Rs. 50 per annum by the sale of *gur*, wheat, vegetables, etc.; and this amount he spends in purchasing cloth and other necessaries of life. Thus, in a normal year, the produce of his land is sufficient to carry him through without debt or difficulty. In many cases, however, he has to repay old

debts, and cultivates on credit till some crop is reaped, for whenever a social ceremony, such as *srāddha*, marriage, etc., takes place in the family, he has to go to the *mahājans* (money lenders), who generally charge high rates of interest. As social ceremonies are not of infrequent occurrence, and as the cultivator has few means to repay his debts, his lands sometimes pass into the hands of money-lenders. But, on the whole, the peasants of the district are well-to-do, and they have to contend more with the consequences of their insanitary surroundings, *e.g.*, malaria and cholera, than with actual want of the necessaries of life.

As regards the labouring classes, there is a large class of field labourers who are permanent servants of the cultivators, being employed by the year to cultivate the fields and receiving in return one-third of the produce. During the year before the crop ripens, these labourers live on advances of grain given by the cultivator, which are deducted with 25 per cent. interest from their share of the crop at harvest time. As they depend on the cultivators to advance what they require, few of them are free from debt. Being mostly low caste men, they are assisted by their women and children, and eke out their livelihood by other employments, for field labour only occupies them for seven to nine months. Non-agricultural labourers work chiefly at house-building, carrying goods and other miscellaneous odd jobs; they also work in the fields when there is an unusual demand for labour in cultivation. There are not many mendicants, and such as there are, are usually old people past work from age or disease, who are supported by charity.

CHAPTER VIII.

MINES, MANUFACTURES AND TRADE.

Mines. Iron.

THE mineral products of the district are iron, coal, limestone, laterite, granite and sandstone. The iron ore of Bīrbhūm occurs in beds towards the base of the laterite deposits. The ore is not only abundant, but also contains a high percentage of iron, averaging over 40 per cent, and being occasionally nearly 60 per cent. It is not now worked, but formerly its extraction and manufacture constituted an industry of considerable importance. The first application to work the iron mines of Bīrbhūm by an improved system was made in 1774 by a native, Indra Nārāyan Sārmā, who offered terms to the Government through the Burdwān Council, which it was not likely he would ever have been able to fulfil, as they involved, after the fourth year of occupation, the payment of a rent of Rs. 5,000 per annum.* Though the offer was accepted, the lease was never taken up. In 1777, Messrs. Motte and Farquhar memoralized Government to be allowed the exclusive privilege of manufacturing iron in the Honourable Company's possessions in the country west of the meridian of Burdwān and of selling the produce free of duty. This was without prejudice to the rights of Messrs. Summer and Heatly, who had mining privileges in certain districts of Bīrbhūm and Pānchet. They claimed to be exempt from all interference by the members of the Burdwān Council and any of the Company's officers resident in the provinces included in the above-mentioned limits; all matters of dispute were to be referred to the Governor's Council, as the local officials, being traders in these districts, might be interested judges. The place first selected by them for the furnaces was, strangely enough, situated

* J.A.S.B., Vol. XII, p. 546.

in Jherriá in Pánchet, but the *Lohá Mahálś* of Bírbhúm were to be made over to them on the existing terms and conditions. On their part they contracted to cast shot and shells, and to supply them at Fort William, at four-fifths of the average cost of the same when landed from Europe. They further contracted to pay to the Company one-twentieth of the profits of a lead mine (at Hisatu or Sidpa) in Rámgarh, which they also proposed to work.

In the following year permission was granted to Mr. Farquhar to enter into possession. He then begged for an alteration in the terms, having in the meantime discovered that the ores of Bírbhúm were better suited to his purpose than those of Jherriá. This was granted, but a series of troubles awaited him from the opposition of the *jágírdárs* and Rajá In 1779, after further correspondence, an advance of Rs. 15,000 was made by Government to Mr. Farquhar, in order to enable him to complete his furnaces, etc., and he carried on from that time to 1789, with what result, as regards the manufacture of iron, is not known; but the records are full of accounts of disputes and contests with the natives, who actually claimed that the revenue from the *Lohá Mahálś* belonged to them, though Government had received it before Farquhar obtained the lease. In 1789 he relinquished the speculation and was appointed to the gunpowder manufactory at Faltá, but he retained the lease of the *Lohá Mahálś* till 1795, after which they lapsed to the zamíndár, who disposed of parts of the estate. The new proprietors commenced to levy dues on the iron mines within their lots, and as a matter of course litigation ensued. Finally the Court (Sadar Díwáni) issued rules which established and defined the rights of the holder of the *Lohá Mahálś*, who had purchased them as a separate lot at the ultimate sale of the zamíndári. It would seem, therefore, that the Government had allowed the mining rights, their claim to which they had distinctly asserted when leasing the mines to Farquhar, to slip through their fingers. It is stated that Bírbhúm hook iron, during the period of Farquhar's labours, was sold in Calcutta at Rs. 5 per maund, Balasore at Rs. 6-8, and English at from Rs. 10 to Rs. 11. In all probability this iron was produced by the direct native process, not by European methods. The above is taken from one of a series of "Contributions towards a History of the Development of the Mineral Resources of India, by S. G. T. Heatly."*

* J. A. S. B., Vol. XII, 1843, p. 542.
† *Op. cit.*, Vol. XIV, p. 754.

In 1845, Mr. Welby Jackson* published a short account of the Bīrbhūm iron works as they were then carried on by natives. There were about thirty furnaces which, he says, produced, at a cost of Rs. 17, about 25 maunds of iron at each smelting, which lasted for four days and nights. He alludes to the work as gradually destroying all the fuel in the vicinity. The farmer of the *Lohā Mahāls* claimed one rupee for each smelting and 6 pice on each maund of refined iron. Mr. Jackson enquired into the monopoly, which struck him as curious, and was told that it came about as has been above described. He left the district before he had fully enquired into the matter, but he states that he doubted the right claimed and could not conceive how it had originated. He was not apparently aware of the full facts of the case, viz., that a predecessor of his had sold on behalf of the Rajā's estate what was really Government property.

In 1852 Dr Oldham reported on the iron ores of Bīrbhūm and the Dāmodar valley. His attention had been especially directed by the Court of Directors to the question of iron manufacture in connection with the introduction of railways into India. In this paper there is the first description of the nature and mode of occurrence of the ore, which is described as consisting of partly earthy and partly magnetic oxides of iron, which occur disseminated among and spreading in an entangled manner through soapy trappean claystone, its origin being due to infiltration into cracks and joints. The bed or layer impregnated was stated to be 5 feet thick. Altogether Dr. Oldham's opinion as to the available amount of ore was that the supply was not so great as subsequent investigations have shown it to be Native furnaces, on the large scale which seems to have distinguished those of Bīrbhūm from those found elsewhere in India, were in operation at four centres, viz., Ballia, Nārāyanpur, Deochā, Dhamrā and Gānpur. At Deochā there were thirty furnaces for the reduction of ore; these were worked by Muhammadans, the refiners being Hindus. The estimated average outturn from each furnace in the year was 34 tons of iron, and as there were believed to be in all seventy furnaces, the total outturn of *kachchā* iron was estimated at 2,380 tons in the year. In these furnaces the *kachchā* iron, unlike that produced in other parts of India, formed at the bottom of the furnace in a molten condition, and resembled good pig-iron. The refining was really a sort of puddling process, which induced a pasty condition admitting of

*Vide Engineers' Journal, Calcutta, Vol. III, p. 112.

the iron being drawn out and hammered until it became thoroughly malleable.* Ten maunds of the *kachchā* iron were said to yield seven maunds and ten seers of the *pakkā*, from which the outturn of refined iron was deduced to be, in round numbers, 1,700 tons, at a cost of £4-4-0 per ton. To prepare this in marketable shape as bars, etc., would require, according to Dr. Oldham's estimate, an additional expenditure of 50 per cent., the final result being that at £6-6-0 it could not compete with English iron at the prices then prevailing in Calcutta, though, being a charcoal iron, its softness made it better suited for some purposes than English iron. In view of the daily increasing difficulty about fuel, Dr. Oldham finally concluded that the absence of economical fuel and the scanty supply of ore determined the inapplicability of any extended series of operations for smelting and manufacturing iron in the district of Bīrbhūm.*

About 1855 Messrs. Mackey and Company of Calcutta started the Bīrbhūm Iron Works Company, and established iron works in Birbhūm, fixing on Muhammadbazar as a site for their factories and furnaces. The works were carried on at a loss for several years, were closed and re-opened, the several attempts to establish the manufacture on a profitable footing proving abortive. The employment thus afforded to the indigenous iron-smelters, coupled with the infliction of a heavy royalty, all tended to break up the native industry, and in 1870 there was but one of their large furnaces in operation in Deochā. Subsequently, in 1872, when the native landlord, to whom Mr. Mackey's works at Muhammadbazar lapsed, attempted to re-open them again, this last furnace was closed; and with it the most complete indigenous system of iron manufacture ever practised in Bengal was for the time put a stop to.† In 1875 Mr. Hughes of the Geological Survey reported favourably on the prospect of iron manufacture in Bīrbhūm, and shortly afterwards Messrs. Burn and Co. commenced operations; but after some months' trial it was found that the prospect of enlarging the works did not promise to be a profitable speculation, and thus ceased the last of the many attempts to manufacture iron which have been made in this area.

Professor Ball sums up the history of the industry as follows:—"The history of the attempts which have been made to establish

* The above account is reproduced from Professor V. Ball's Economic Geology of India (1881), pp. 362-65.

† Geology of the Rājmahāl Hills, Memoirs Geological Survey of India, XIII, 88.

iron-mining on the European system in the district of Bīrbhūm is a long one dating back so far as the year 1777. It fully supports the truth of the old adage that history repeats itself. The same sanguine hopes, the same attempts to carry on work in spite of discouraging circumstances, the same failures and the final loss of expended capital, are recorded in the accounts of each attempt."*

Coal. Coal was discovered a few years ago at a place called Arang, about 28 miles from Surī, on the banks of the river Ajai in the western extremity of thāna Dubrājpur. The colliery, which was opened in 1901, has one pit, 75 feet deep. The output in 1908 was 1,100 tons, and the total number of labourers employed averaged 5,940 per diem.

Quarries. There are some stone quarries on the western border of thānas Rāmpur Hāt and Nalhatī, from which a small quantity of stone is taken and exported for use as ballast on railway lines. Stone is also found at Dubrājpur and Bakreswar, but is not worked. Lime is produced from *ghuting* or nodular limestone, which is found in abundance in the district.

Manufactures. The manufactures of the district are not of much economic importance, but some, such as the silk spinning and weaving industry at and round Ganutiā and the lac manufacture of Illāmbazar, are of historic interest, having been started by the early pioneers of English trade. Other old industries, such as the manufacture of indigo, have died out.

Silk weaving. The manufacture of silk, though affecting a very small part of the district, viz., a fringe 3 or 4 miles broad on its eastern boundary, from the Mor on the south to the railway on the north, is the principal industry of Bīrbhūm Here mulberry cocoon rearing and spinning are carried on, the silk factory of Ganutiā, which belongs to the Bengal Silk Company, being the centre of these industries ; while the principal villages where mulberry silk weaving is carried on are Baswa, Bishnupur and Margrām, also within the jurisdiction of the Rāmpur Hāt thāna. The silk weaving industry is of less magnitude and importance than the silk spinning industry, but the Baswa-Bishnupur silks have more than a local repute.

Cocoon-rearing. Three varieties of mulberry silkworms are reared, viz.,—(1) the *nistari*, (2) the *chhota-palu* or *deshi*, and (3) the *bara-palu*, which is an annual variety, the egg stage continuing for 10 months instead of 8 to 16 days as in the case of *chhota-palu*

* Economic Geology of India (1881), p. 362.

and *nistari* varieties. The *bara-palu* produces a select class of beautiful cocoons, yielding a yarn which is in much demand among the best weavers: what is called *dhali* (white) silk is made out of thread spun from white *bara-palu* cocoons. The *bara-palu* silk goes almost entirely to feed the native looms, and at present there is no demand for it in the European factories. The *chhota-palu* ranks next as regards the quantity of the silk it produced, but the fibre of the *nistari* silkworm is finer and softer. On the other hand, the *nistari* cocoons yield a smaller proportion of silk. There are, as a rule, three crops of *nistari* and one of *chhota-palu* in the year, while the *bara-palu*, which is reared in the spring, forms the greater part of the March crop or *baad*. The Aswin (September) crop of *chhota-palu* cocoons is of considerable importance, seeds being taken from it to other districts for the early November crop. The district is in fact a recognized seed-rearing centre (*joar*), known as the Rarh Joar, to which cocoon rearers resort for the purchase of good seed.

Two kinds of mulberry are grown, viz., the *bara tunt* and the *chhota tunt*, which are also known as *kajli* and *pheti* respectively. They may be distinguished by their leaves and by the kind of soil on which they are grown. The *chhota tunt* has palmate leaves and grows on sandy soils. The *bara tunt* has lanceolated leaves, which are also thicker and slightly rougher than those of the *chhota tunt*, and it grows on stony soil. There is this further distinction that the *bara tunt* is more suitable for the *bara-palu*, and the *chhota tunt* for the *chhota-palu* silkworm; while the *nistari* silkworm is reared indifferently on both. The mulberry most commonly found in Birbhum is the *chhota tunt*. It is planted in raised fields, banked and ditched all round, which are plentifully manured with cow-house litter, mud from the buttom of tanks, and the chrysalides of reeled-off cocoons. The best land for it is fresh alluvion, which does not require manuring for two or three years. The cocoons are either (1) taken to the nearest *hāt* for sale, or (2) killed by exposure in thin layers to the sun and reserved for sale until the *paikars* or agents of the European filatures come round, or (3) steamed in a basket covered over with cloth, under which a pot of water is kept boiling, and reeled off into silk, or (4) if they are formed in a very healthy manner, are bought up by travelling rearers, who go from village to village, and sometimes from *joar* to *joar* in quest of seed. In this district, however, the cocoon-rearers themselves generally spin the silk into thread by the native method of reeling. The silk is called *khamru*,

and it is estimated that about 500 maunds per annum are produced.

Filatures.

Raw silk of a better quality is spun in filatures, of which the most important is that at Gauutiā, on the north bank of the Mor, where the present factory was established in the 18th century by Mr. Frushard, under a contract for the supply of silk to the East India Company. It is owned by a large firm, the Bengal Silk Company in Calcutta, and is under European management. At Bhadrapur in the north, 3 miles south of Nawādā station (Lohāpur) on the branch railway from Nalhāti to Azīmganj, is another filature owned by the same company, with an outwork at Kaytha, both under native management. These filatures all use steam for damping the cocoons, heating the water in which they float during reeling, and drying the silk. The surrounding country used to be dotted with numerous filatures, but all of those situated in the Birbhūm district are either in ruins or unworked.

In addition to the filatures, there are numerous hand spindles in the houses of the villagers in the mulberry tract, especially in Baswa and Bishnupur in the Rāmpur Hāt thāna, and Palsā in thāna Murarai. The fabrics turned out are generally plain piece-goods, the variety most commonly made by the weavers when working on their own account being *kora* This is an inferior silk, thin and rough, not glossy and soft like ordinary silk, but stiff and hard like cotton stuff. When, however, they work on commission for the European firms of Berhampore, and are supplied with well spun silk, the Bishnupur weavers are capable of turning out high class fabrics When this is done, the silk dealers make cash advances to them for the purchase of the raw silk, undertaking to purchase the fabric when finished at the market price of the day. The products, which generally consist of *dhotis*, *sāris*, with printed and plain borders, pieces (*thāns*), 10 yards and 7 yards long, and handkerchiefs, are sold locally, and sometimes exported to other parts of the province through agents. *Thāns* are sold at 12 annas to Re. 1-8 per yard, *dhotis* with ordinary borders at Rs. 6 to Rs. 10, *sāris* at Rs. 8 to Rs. 15, and handkerchiefs at Rs. 3 to Rs. 6 per dozen.

Tussur weaving.

Besides silk weaving as described above, tusser weaving is carried on in many villages of the district, the most important of which are Bīrsinghpur, Kālipur, Karidha, Ilāmbazar and Tāntipārā. A few cocoons are brought in from the western jungles, where they are either reared by the aboriginal or semi-aboriginal tribes or gathered from the forest trees. The quantity of cocoons gathered or reared in this district is, however,

not sufficient to meet the demand, and the weavers therefore get their supply from the Santāl Parganas and Singhbhūm. The cocoons, having passed into the weavers' hands, are reeled and woven into *dhotis*, *sāris* and *thāns*, 10 yards in length, which are coloured if required. *Dhotis* sell at Rs. 3 to Rs. 6, and *sāris* at Rs. 4 to Rs. 8; while *thāns* of ordinary tusser sell at Rs. 7-8 to Rs. 10 and *pakwan* thread at Rs. 12 to Rs. 18. These cloths are sold locally and exported to other parts of Bengal. It is reported that in 1907-08 the total quantity of tusser fabrics manufactured was 110 maunds, giving employment, on the average, to 1,800 persons daily.

Lac manufacture.

Lac manufacture is an industry confined to the village of Ilāmbazar The stick lac is brought in from the western jungles by low castes or semi-aboriginal tribes. In this form it consists of small twigs surrounded by cylinders of translucent orange-yellow gum, in which the insects are imbedded, the best lac is said to be obtained from twigs of the *kusum* tree, and it is also produced on the *sāl*, *pālas* and *pākur* trees. The raw material, when brought in, is separated from the twigs and ground into small particles, which are placed in large earthen jars and allowed to soak in water for about 24 hours. It is then well rubbed by the hand till the colouring matter has been thoroughly extracted. This consists of the dead bodies of the insects (*Coccus lacca*) buried in the gum. These, when the fluid is allowed to stand in large vats, gradually precipitate themselves to the bottom. The water is drained off, and the sediment, after being strained, pressed and dried, becomes lac-dye ready for the market. This is used for preparing the cotton, called *aitā*, which is used by Hindu females. The gummy exudation of the insect, in the meantime, is carefully dried in the sun, placed in long bags, and melted over a strong fire. It is then squeezed out, either in thin sheets upon an earthen cylinder, when it becomes shellac, or in dabs upon a plantain stalk, when it is known as button lac. Leaf lac is no longer made at Ilāmbazar, and the trade is confined to button lac.

Erskine & Co., and subsequently Messrs. Farquharson and Campbell & Co., had a large shellac and lac-dye factory at Ilāmbazar, but this was transferred in the year 1882 to native hands. The industry is now carried on at several small factories in Ilāmbazar and its neighbourhood, where the artisans turn out a number of lacquered articles, *e.g.*, bracelets, ink-pots, rulers, cups, pots and toys, such as imitations of fruits, flowers and animals, which are said to be of good design and workmanship. The industry is carried on by a class of men called Nuris.

Cotton weaving.

Cotton weaving has declined for many years past owing to the import of cheaper machine-made cloth, but has recently revived as a result of the *swadeshi* movement. Coarse cotton cloths are now woven in many villages, which find a sale among the cultivating and labouring classes. Finer cloths, such as twills, table cloths, *pardâhs*, bed sheets, and cloth for coats and shirts, are made at Bolpur, Dubrājpur, Karidha, Tāntipārā and Alunda.

Sugar manufacture.

The manufacture of molasses is a village handicraft, and sugar is refined, according to native methods, at Kukutia in thāna Dubrājpur, a village which has long supplied the needs of Brāhmans and devotees, and in which the use of foreign sugar has been abandoned. The quantity of sugar produced at Kukutia in 1907-08 is reported to have been 2,500 maunds.

Brass and bell-metal.

Brass and bell-metal wares of an ordinary description are made in many villages, but the braziers of Dubrājpur and Nalhati turn out articles of a better finish, which find a ready sale outside the district. The brass utensils and pots of Ilāmbazar, Tikarbetha and Hazratpur are also said to be of a superior quality.

One class of brass-ware has more than a local reputation, viz, what are known as *pais* or Suri bowls. These are really rice measures made of wood, bound and ornamented with brass, which gives them a handsome appearance. The bowls are manufactured at Lakshmipur (generally known as Lokpur), a village in thāna Khairāsol about 6 miles south of Rājnagar. They are made to order, and there is a considerable demand for them among Europeans, but as there is only one man who makes them, they are not readily obtainable. They are of various sizes, from 10 seers down to 1 chittack, and are made in sets. A set of eight bowls from 10 seers to 1 chittack costs Rs. 46; a set of seven bowls from 5 seers to 1 chittack costs Rs. 31; a set from 2½ seers downwards (six bowls) cost Rs. 19; and a set from 1 seer downwards (five bowls) costs Rs. 11. The general public use bowls of 1 seer and less for domestic purposes.

Iron-work.

Iron-work is carried on in almost every village of the district by the local blacksmiths, who make the agricultural implements in common use. At Dubrājpur, Kharun, Lokpur, Rājnagar and Rāmpur Hāt iron articles of a better class, such as knives, scissors, padlocks, swords, axes, daggers, cooking and other utensils, are produced and sold locally. The nut-crackers of Dubrājpur are well known in the district.

Indigo manufacture.

Indigo manufacture used to be an important industry in Birbhūm, the centres of the industry being Ilāmbazar and Supur, where there were large factories. It was first introduced into the district about 1795 by Mr. John Cheap, the Company's Commercial

Resident, and was carried on by Mr. David Erskine, who established a factory at Doranda, 6 miles west of Surul, and subsequently at Ilāmbazar. He started the firm of Erskine & Co., which also opened several collieries. It only ceased to exist in 1882, and in 1872 possessed eight factories in Bīrbhūm and ten beyond the district boundary. The factory at Supur was closed in 1887 after working for a century, and there are now no factories in the district.

Other industries.

The other industries of the district, such as pottery manufacture, basket and mat-making, shoe-making, etc., are merely village handicrafts which call for no description: the pottery of Rājnagar has a local reputation. Conch-shell ornaments are made in some villages, and the Sānkhāris of Karidha are said to have attained a high degree of skill in making them.

Trade.

The chief export of the district is rice, which is despatched by rail both up and down the line The other exports, such as lac, silk, and oil-seeds, find their way mostly to the Calcutta market. The principal imports are salt, cotton, cotton cloth, pulses, tobacco, wheat, coal, kerosene oil, and gunny-bags. The district trade is carried on by permanent markets in the towns and large villages, and to some extent by means of fairs. The principal trading villages and seats of commerce are Dubrājpur, Surī, Bolpur, Sainthiā, Purandarpur, Ahmadpur, Fatehpur, Rāmpur Hāt, Margrām, Nalhāti and Mararai. Ilāmbazar, Kirnahar and Muhammadbazar were also formerly markets of some importance, but their trade has declined. Surī, the head-quarters town of the district, is unimportant from a commercial point of view.

A curious trade in live fish is carried on between the Bhāgīrathi and the inland villages of this district. The fry are caught in the river and put in *gharās* or pots of water, which are carried by coolies "bhangy" fashion, *i.e.*, a pot hangs from each end of a piece of split bamboo, four or five feet long, which is carried over the shoulder. The coolies come by rail to the nearest stations and thence carry the fish round for sale through the villages, where they are put into tanks. Throughout the journey the water in the *gharās* has to be kept in motion, or the fish die. The carriers, when not walking, are therefore compelled to impart to the *gharās* a continual jerky motion up and down. It is a quaint sight to see 40 or 50 of these coolies on the platform waiting for a train. They stand on their toes and keep up a rapid, rhythmical and unintermittent shrugging of the shoulders, and twitching of the ankles and knees, which, with the springing-up of the bamboo and the weight of the *gharās*, keeps the water regularly shaken up and down.

Weights and measures.

The following tables show the weights and measures in use in different parts of the district in addition to the standard seer of 80 *tolās*:—

Subdivision.	Name of weight.	Equivalent number of tolās.	Area.	Used for—
Surī ...	*Kachha* seer .	$58\frac{1}{16}$	In general use.	All kinds of goods.
		60 .	Surī .	.....
	Batkarī	58	Bolpur ...	Rice and salt.
		72 .	Ilāmbazar	Molasses.
		80 .	Sākulipur ...	Oil-cakes, etc.
	Pai .	110 ...	Rājnagar ...	Rice and pulses.
		75 .	Sākulipur ...	.....
		80 .. .		Mustard seed.
Rāmpur Hāt ...	*Kachha* seer	$58\frac{1}{16}$	In general use.	All kinds of goods.
	Tul .	$58\frac{1}{8}$ ..	*id* ...	Fish and vegetables.
	MEASURES OF CAPACITY.			
Surī .	Seer ...	1 quart or $58\frac{1}{16}$ *tolās*.	In general use.	Rice, oil-seeds, milk and *ghī*.
	Pai	$\frac{1}{4}$ quart or $29\frac{1}{8}$ *tolās*.	*id* .	
	Bamboo *chunga*	70 *tolās* ...	*id*	.....
	Ari	10 seers	*id* ...	Paddy.
Rāmpur Hāt ...	Seer . ..	$58\frac{1}{16}$ *tolās* .	*id* ...	Rice, milk, etc.
	Pai	$29\frac{1}{8}$ *tolās* ...	*id* ...	.....
	Bamboo *chunga*	73 *tolās* ...	*id* ...	Paddy.
	Ari .. .	$7\frac{1}{2}$ seers or $58\frac{1}{16}$ *tolās*.	*id* ...	*id*.

CHAPTER IX.

MEANS OF COMMUNICATION.

DEVELOPMENT OF COMMUNICATIONS.

THE first map showing roads in the tract of country now forming the district of Birbhūm is Valentyn's Map of Bengal, which was compiled from notes left by Van den Broucke, the Dutch Governor of Chinsura from 1658-64. In this map "Baccaresoor" is entered with one road running south-east to Burdwān and another running north-east to Cossimbazar. The map, however, does not show the old Badshāhi road, which is known to have been in existence at least as early as 1516 A.D. The Bādshāhi road can still be traced in the Jangipur-Burdwān road, which runs for some distance along the eastern border of the district. To the north there is a short length close to the eastern boundary of the Nalhāti thāna, and in the south it passes for some miles along the eastern boundary of the Sākulipur thāna, from which it proceeds to Mangalkot and thence to Burdwān.

At the beginning of the 19th century there were but few roads in the district, and these few had been made by the Commercial Resident, Mr. Cheap, for the transport of goods to and from his factory at Surul, *e.g.*, the roads from Surul to Ganutiā and to Kātwā in Burdwān. The only road passable throughout the year for carts was the road from Surī to Burdwān through Surul. A road to Murshidābād had been completed in 1796, but this was without bridges and drains. A road to Kātwā and another to Deoghar were repaired at times by the convicts, but the number of the latter was insufficient to keep them in good condition. The zamīndārs were bound by their engagements at the time of settlement to pay attention to the roads in their estates, and they are said to have kept them "in a passable state of repair" when ordered to do so by the Magistrate. "Some", wrote the Magistrate in 1818, "even planted roadside trees."*

The Loop Line of the East Indian Railway was opened as far as the Ajai river in October 1858, and was extended through

* R. G. Drake-Brockman's *Notes on the Early Administration of Birbhum*, p. 8.

the district in the following year. In 1862 a private company constructed a branch line, known as the Nalhāti State Railway, from Nalhāti to Azīmganj, which was acquired by Government 10 years later. Within the present century the length of railway line in the district has been further increased by the construction of a branch line from Sainthiā to Ondāl.

The district is now well provided with means of communications, for the Loop line bisects it from south to north, in the south-west the Sainthiā-Ondal line connects it with the Chord line, and in the north-east the branch line running due east to Azīmganj serves a broad tract of country in the Rāmpur Hāt subdivision. There are no canals, and the rivers, being torrents in the rains and nearly or entirely dry for the rest of the year, are practically useless for transport. On the other hand, there is a well-planned, and in the Surī subdivision well-executed, network of roads, which compensates for the absence of waterways.

RAILWAYS.

The Loop line enters the district from Burdwān by a bridge across the Ajai river, which has a length of 2,200 feet and consists of 30 masonry arches of 50 feet span. It passes through the heart of the district for some 65 miles and leaves it at the Rājgāon station, which is situated on the border of the Santāl Parganas to the north. Proceeding from south to north, the stations on this line and their distance from Calcutta are:—Bolpur (99 miles), Ahmadpur (111), Sainthia (119), Mallārpur (129), Rāmpur Hāt (136), Nalhāti (145), Chattra (150), Murarai (155) and Rājgāon (162 miles).

Nalhāti is a junction for a branch line running due east to Azīmganj in the Murshidābād district, which has two stations in Bīrbhūm, viz., Takipur and Lohāpur (formerly known as Nawādā). This railway was constructed in 1862 by a private company, but as a private speculation it proved a failure, and it was acquired by Government in 1872. The total length of the line is 27¼ miles.

The Ondāl-Sainthiā line connects Surī with the Chord line at Ondāl on the one side and the Loop line at Sainthiā on the other side. It enters the district from Burdwān, by a bridge over the Ajai near Pandaveswar, which is a railway station just on the south bank of that river. The stations within the district are, proceeding from south to north, Panchrā, Dubrājpur, Chinpai, Surī and Konri. The Ondāl-Sainthiā-Azīmganj trains run from Ondāl to Azīmganj and *vice versā*; and some of the trains run between Asansol and Azīmganj.

ROADS.

The District Board maintains 182 miles of metalled roads, 303 miles of unmetalled roads, and 172 miles of village roads,

which are merely fair weather tracks. The most important of these roads are shown in the following table:—

From	To	Length, miles.	Inspection bungalows.	Unbridged rivers.
Surī ...	Sainthiā ...	10½	Sainthiā ...	..
,, .	District boundary on west (towards Dumka).	8½	Surī ..	...
,, ...	Kalgrām ...	31½	Ahmadpur (18th mile). Laghātā (22nd mile)	Kopi (22nd mile).
,, ..	Rājnagar	14½	Rājnagar ...	... .
,, ...	Muhammad-bazar	7½	..	Mor (3rd mile).
,, ...	Ajai river	20½	Dubrājpur (14th mile).	Bakreswar (10th mile). Sal (18th mile) Hingla (19th mile).
Bolpur ...	Ilāmbazar	13	Bolpur Ilāmbazar.	.....
,,	Bengchatra ...	10		.....
,, ...	Sakulipur ..	12	Sākulipur .	.....
Dubrājpur	Ilāmbazar	16	.....	Sal (13th mile).
Nalhāti ...	Nawadā	11	Nalhāti ..	.....
Sainthiā ...	Mahesha	11	Sainthiā ...	Mor (2nd mile).
Purandarpur	Ajai river	18	.....	Bakreswar. Kopi.
Muhammad-bazar.	Mallārpur	13	Mallārpur	Dwārkā (8th mile). Kulay (12th mile).
Surul .	Ganutiā	10½*	..	Koi (15th mile).
Dubrājpur	Chandrapur *vid* Bakreswar.	11½		Bakreswar (8th mile).

* The first three miles are not maintained, and there is no trace of the road for this distance.

The Surī-Sainthiā road and the Sāinthiā-Mahesha road are parts of the old road to Murshidābād, which is known to have been in existence at the end of the 18th century. The second road is part of the road from Bhagalpur to Surī (103 miles long), which is commonly known as the Dumkā road. The Surī-Rājnagar road is another old road, having been formerly the high road from Surī to Deoghar, which was also in existence at the end of the 18th century. The Nalhāti-Nawādā road forms part of the embankment of which the other part is occupied by the Nalhāti branch railway. The road from Purandarpur is part of the old road from Surī to Burdwān *vid* Surul, and dates back over 100 years, while the Surul-Ganutiā road is that made by Mr. Cheap when Commercial Resident at Surul.

The only navigable rivers are the Mor and the Ajai, and there is practically no river-borne traffic. There are nine ferries, WATER COMMUNICATION

of which the most important are the Tilpārā Ghāt ferry across the Mor, the Laghāṭā ferry across the Koi, and the Ilāmbasar Ghāt ferry across the Ajai. The ferries ply only during the rains when the rivers are in flood, passengers and goods being transported in ordinary country boats. For crossing small streams floats resting on inverted water-pots or the hollowed-out trunks of palm trees are used.

CONVEYANCES. Other conveyances in common use are bullock-carts, carriages and *pālkis*. Carriages used to ply regularly between Surī and Sainthiā, but the business is on the decline since the introduction of the Ondāl-Sainthiā railway.

POSTAL DEPARTMENT. There are 68 post offices in the district and 290 miles of postal communication. The number of postal articles delivered in 1908-09 was 2,017,964, including 623,350 letters, 1,114,858 post-cards, 82,472 packets, 145,574 newspapers and 21,710 parcels. The value of money-orders issued was Rs. 11,02,157, and of those paid Rs. 5,98,539, while there were 3,292 Savings Bank deposits, the amount deposited being Rs. 1,64,088. There are postal telegraph offices at Surī, Bolpur, Hetampur Rājbāti, Murarai, Nalhāti, Rāmpur Hāt and Sainthiā.

CHAPTER X.

LAND REVENUE ADMINISTRATION.

REVENUE HISTORY.

THE district was formerly held as a military fief by the Pathān Rājās of Bīrbhūm, to whom it had been granted as a means of guarding the frontier of Bengal against the incursions of the hill tribes of Chotā Nāgpur. The Rājās had under them a standing militia composed of a warlike Muhammadan peasantry, who held allotments of land in return for their services. "This district," wrote Mr J. Grant, Chief Sarishtādār of Bengal in 1786, "was held by a tenure different to any other known in the country. In some respects it corresponded with the ancient military fiefs of Europe, inasmuch as certain lands were held *lākhirāj* or exempted from the payment of rent, and solely appropriated for the maintenance of troops" Elsewhere he writes:— "Bīrbhūm, with all its ascertained dimensions from the year 1760, contains, according to Rennell, 3,858 British square miles, and is the fourth in magnitude of all the single zamīndāris of Bengal, being, next to Burdwān, in superficial measure the most extensive. Of this area, near two-thirds (comprising all the lands among the hills west of Nagar, the capital, and still in great part jungly, uncultivated, or little known) were assigned over for the maintenance of some thousands of *barkandāzes*, matchlock-men or native Hindustāni militia appointed to guard the frontiers; while the remaining portion of the territory was alone productive to the State of yearly revenue rated at Rs. 3,77,645. The zamīndār, a Musalmān of the warlike and proverbially treacherous Pathān race, soon found out the importance of the station in which he was placed to favour princely independence, when the distractions of the Mughal empire, or feeble divided administrations of usurping *Subahdārs*, awakened the dormant passion of unlawful ambition."

Mr. Grant then mentions that after the death of Murshid Kulī Khān, the Rājā, at the head of a formidable body of feudatories, 'in a frontier province of great extent, unexplored and difficult of access, subject only to the weak control of a delegate' found it an easy task to throw off his allegiance and

assert his independence. "The consequent loss of revenue, however, was less felt than the political disadvantage of dismemberment of a territory which commanded all the leading passes direct from bordering foreign independent countries, when, in the government of Alī Vardi, the Marāthās found their way into Bengal through this district, by the treacherous connivance of the refractory zamīndār. Its re-annexation became, therefore, an object of the first importance immediately after the conclusion of the war, and under so vigorous an administration was soon partially accomplished, with an increase of Rs. 68,223 on account of the *abwābs* (*khāsnavisi* and *chaut*) in addition to the ancient established *jamā*. But the complete reduction of the rebellious superintending farmer, who in the period of his independence had grievously oppressed, by means of his foreign Musalmān soldiers, the native inoffensive Hindus composing the body of peasantry and manufacturers, was reserved for the *Subahdāri* of Kāsim Alī."

This measure was effected in 1760, when the privilege of holding such an extensive area revenue-free was resumed, "having been found entirely subversive of the sovereign authority under preceding Musalmān administrations, and inconsistent with present exigencies, or a more vigorous intelligent system of government, which required the sword to be kept unparticipated in the hands of the ruling power." The *lākhirāj* tracts, when brought under assessment, produced a very considerable accession of revenue to the *Subahdāri*, or Government treasury, under the name of *kifāyat* or profit; and the total assessment of the territory held by the Rājā of Birbhūm was Rs. 8,96,275, besides *abwābs* of Rs. 68,223 and *taufir* of Rs. 6,508—in all, Rs. 9,71,006 instead of Rs. 4,45,867 as before.* It must be remembered, however, that the Rājā's territory extended over no less than 3,858 square miles and comprised a large area outside the present district, viz., the whole of the Deoghar subdivision and other parts of the Santāl Parganas.

In 1765, the year of the cession of the Dīwāni to the East India Company, the revenue due from the Rājā for the entire zamīndāri was 8 lakhs, though, according to Mr. Grant, there was reason to believe that 13 lakhs were collected then and some years afterwards. The famine of 1770, however, impoverished the Rājā, for a large proportion of the land went out of cultivation and rents could with difficulty be collected for the remainder.

* Analysis of the Finance of Bengal, Fifth Report (Madras reprint, 1883), pp. 262, 294-5, 330, 331, 407-9.

In spite of this, the revenue demand was steadily increased every year, though every year the actual amount paid was only half or a little more of the demand. The Rājā pleaded that the revenue agents (*āmils*) could not possibly collect the revenue from the impoverished ryots, and at each new assessment they were superseded and imprisoned in the debtors' prisons for arrears. His plea was not believed, Mr. Grant, for example, pointing out (in 1786) that though only Rs. 5,31,321 were collected, the *mālguzāri* fund was returned at Rs. 11,44,825. He admitted that Rs. 4,11,613 were deducted on account of *palātikā* or deserted lands, but thought that this was due to fallow land being classed as uncultivable waste. In 1781 the payment of revenue had risen to 4½ lakhs, but he said that in 1783 and onwards there had been an annual defalcation of upwards of 8 lakhs. Finally, in 1786, the Rājā himself, Bahādur Zamān Khān, was imprisoned as a defaulter and his property attached.* Next year the Collector, Mr. Sherburne, made, as best as he could, an enquiry into the assets of the estate, and in accordance with his recommendation the revenue for 1788 was fixed at Rs. 6,11,321. The Rājā was at the same time allowed to return and resume the management of his estate, on condition that he did not interfere with the renters and ryots, for many of the latter had fled from the district in consequence of his exactions.†

The difficulties of revenue administration in these early days of British rule may be gathered from the remarks of Mr. Sherburne—"It has become an almost annual custom for the ryots, headed and excited by the *mandals*, to assemble in arms and put a stop to the collections till they brought the farmer to terms. The revenue can never be realized without the presence of a military force to check these disturbances." Further evidence on this point is given by Mr. Shore, who in his famous Minute of June 1789 regarding the Permanent Settlement wrote :—

"In almost every village, according to its extent, there is one or more head ryot, known by a variety of names in different parts of the country, who has, in some measure, the direction and superintendence of the rest. For distinction, I shall confine myself to the term Mandal; he assists in fixing the rent, in directing the cultivation, and in making the collections. This class of men, so apparently useful, seem greatly to have contributed to

* *Fifth Report*, pp. 406-9; Bengal M.S. Records (1894), pp. 91, 133 (letter No. 1137); Annals of Rural Bengal, pp. 63, 64.

† E. G. Drake-Brockman, *Notes on the Early Administration of Birbhūm*, pp. 4, 9, 10.

the growth of the various abuses now existing, and to have secured their own advantages, both at the expense of the zamīndār, landlord, renter and inferior ryots. Their power and influence over the inferior ryots is great and extensive; they compromise with the farmer at their expense, and procure their own rents to be lowered without any diminution in what he is to receive, by throwing the difference upon the lower ryots, from whom it is exacted by taxes of various denominations. They make a traffic in *pattas*, lowering the rates of them by private stipulations, and connive at the separation and secretion of lands. If any attempt is made to check the abuses, they urge the ryots to complain and sometimes to resist. In Bīrbhūm a striking instance of this has been exhibited; when an attempt was made to equalize the assessment of the ryots by moving the burthen from the lower class, and resuming the illegal profits of the Mandals, an immediate oppisition was made and the complainants came to Calcutta. The Government was obliged to interfere with a military force to anticipate disturbances; and at present the ryots are apparently averse to an arrangement proposed for their benefit, and upon principles calculated to ensure it. On a former occasion, when a general measurement was attempted by the zāmindār of the same district as a basis of a general and equal assessment, the Mandals, by a contribution, prevailed upon him to forego it."*

Another difficulty in the way of proper administration was the practice of granting land as *bāze zamīn*, *i.e.*, revenue-free, so as to exclude it from assessment. According to Mr. Grant, 108,771 *bighās* were entered as *bāze zamīn*, while 127,117 more *bighās* were *chākrān* lands, assigned for the maintenance of 9,784 *thānādārs* or militia men.† In the next 13 years still more land was alienated in this way, for in 1789 there were 217,907 *bighās* of *bāze zamīn*, though only 22,919 *bighās* were registered as such.‡

At the decennial settlement of 1790 Government, accepting the recommendation of the then Collector, Mr. Keating, fixed the revenue at 6½ lakhs, subject only to a deduction for the abolished *sair* duties; and this settlement became permanent in 1793. Muhammad Zamān Khān, who succeeded his father in January 1790,§ proved unequal to the strain of collecting rents punctually and as punctually paying a fixed revenue. He became

* Fifth Report (1883), p. 142.
† Id. p. 409.
‡ R. G. Drake-Brockman, *The Early Administration of Birbhūm*, p. 5.
§ Bengal M.S. Records, p. 167 (letter No. 1530).

so heavily involved, that the Collector reported there was little chance of recovering the arrears except by the sale of his lands. The estate was constantly under attachment, and the Rājā himself put in confinement more than once to compel payment of the arrears, but without success.* In 1795 we find that half the arrears of revenue in the whole of Bengal were due from him and the zamīndār of Rājshāhi. "This failure in their payments", wrote Government in 1795, "has originated in causes wholly foreign to the administration of justice; the former having dissipated, the public revenue in the most profligate extravagance and debauchery, for which, and at the instance of his own family, process has been instituted to bring him under the regulations of disqualified landlords."† Accordingly a charge of disqualification was made by the Collector under Regulation X of 1793 and instituted before the Judge against the Rājā, whose "want of means had resulted from his own neglect and profligacy." Both he and the Rānī were declared to have collected their rents, but, instead of fulfilling their engagements to Government, spent them in idleness, folly, and extravagance.* This great estate was then sold in different lots, with the result that in 1800 Bīrbhūm, instead of consisting of one single estate, was divided into 220 *zamīndāris* held by 233 registered proprietors and paying a total land revenue of *sicca* Rs. 6,93,682. The only portions of the estate left to the Rājā were Sarath Deoghar (now in the Santāl Parganas) and the Ganutiā estate, which was leased out to Mr. Frushard, the Commercial Agent.

The most noticeable features of the subsequent history of the district have been the *increasing subdivision of estates* and the resumption proceedings instituted in 1835. As regards the former, though the area of the district was reduced to 1,344 square miles by the transfer in 1855 of several *parganas* in the west and north-west to the Santāl Parganas, the number of estates was more than doubled and the number of individual proprietors multiplied nearly ten-fold in 70 years; for in 1870-71 there were 510 separate estates paying revenue to Government owned by 2,036 registered proprietors. As regards the latter, the Collector in reporting on the rent-free lands in 1820, wrote that the original donees and their representatives "with a few trifling exceptions have been stripped of every portion by the hundred purchasers of the ancient Rājā's zamindāris."

* E. G. Drake-Brockman, *Notes on the Early Administration of Birbhūm*, p. 10.

† Fifth Report, p. 647.

The *chākrān* lands for the support of the village police and other public servants, which had been excluded from assessment prior to, or at the time of, the decennial settlement were, the Magistrate complained, resumed wholesale by the auction purchasers of the estates. These circumstances eventually led to the Resumption Regulations being enforced, and in 1835 and the following years operations under them were carried out all over the district.*

LAND TENURES. Estates.

According to the returns for 1908-09, there are 1,058 estates on the revenue roll of Bīrbhūm, of which 1,052 are permanently settled, one is temporarily settled and five are held direct by Government. The number of revenue-paying estates and revenue-free estates assessed to road and public works cesses is 2,045 and 399 respectively, the number of recorded share-holders being no less than 16,979.

The permanently settled estates are of different origin and include the following:—(1) *Zamīndāri mahāls*, or ordinary revenue-paying estates, which originally formed part of the large property of the Rājā of Bīrbhūm. These estates are also commonly known as *lāts*, owing to the fact that more than a century ago the large estate of the Rājā of Bīrbhūm was split up and sold in separate lots. (2) *Thānādāri mahāls*, *i.e.*, estates in which originally the whole or part of the land revenue was remitted on condition of the holder providing for police duties. These duties were eventually abolished and revenue assessed instead. (3) *Hazūri tāluks*, *i.e.*, independent *tāluks*, which paid their quota of revenue direct into the treasury and not through the zamīndār, and the holders of which became recognized as zamīndārs. These *tāluks* are now identical with zamīndāris, but some have specific names attached to them, *e.g.*, *āimā* (the plural of *imām*), *madad-māsh*, *bhātiāimā* (from *bhāt* or cooked rice and *āimā*) and *nankar* lands, *i.e.*, lands which were originally granted by the land-holders or rulers to relatives, learned or pious persons, or to officers of State for their maintenance, subject to the payment of a small quit-rent or revenue. (4) *Jangalburi mahāls*, permanently-settled estates, in which the owner has the right of cutting jungle only. (5) *Jalkar* estates in which fishery rights only are permanently settled. Revenue-free estates are generally known as *sidha lākhirāj* or *doem khalāshi lākhirāj* as distinguished from simple *lākhirāj* or rent-free holdings. The usually fall under the same classes as the latter, which are described below.

* R. G. Drake-Brockman, *Early Administration of Birbhūm*, p. 11.

Tenures of the first degree, *i.e.*, those of which the holders pay rent direct to the zamíndárs and themselves collect rent from their tenants, are very numerous, the distinctions between them being in many cases merely nominal. They fall under two main heads, viz., *táluks* or grants and *ijárás* or leases. The former are known as dependent or *pctao táluks*, and the *tálukdár* stands towards the zamíndár in the same position as the latter does to Government. Tenures.

The following are the different classes of dependent *táluks* :— (1) *Shikmí* or *mazkuri táluks*, tenures which existed before the permanent settlement. (2) *Istimrárí táluks*, granted in perpetuity. (3) *Mukarari táluks*, of which the rental was fixed in perpetuity at their creation. (4) *Maurusi táluks*, or tenures which are hereditary whether the rent is fixed or not. (5) *Patní táluks*, *i.e.*, *táluks* granted subject to the liabilities of Regulation VIII of 1819. These *táluks*, which have been created since the Permanent Settlement, were first introduced on the estates of the Mahárájá of Burdwán for the purpose of enabling him to collect his rents more easily. The rights of a *patní tálukdár* are capable of being sublet to subordinate holders, with the exception that, on the sale of the parent *patní* for arrears of rent or other default, all subordinate tenures derived therefrom, such as *dar-patnis*, *sepatnis* and *chaharam patnis*, are extinguished. (6) *Mukarari chak jamá táluk*, *i.e.*, a tenure comprising a part of a village, which is leased out at a fixed rent in perpetuity. Dependent *táluks* are also known as *áimá*, *bhátiáimá*, *madad-másh* and *mankar* according to the object for which they were created.

Ijárás or leases vary in character, according to the special terms of each contract, from a lease for a single year to a lease in perpetuity at a fixed rent. They are generally, however, created for a fixed term of years, and their chief characteristic is that the holder of the tenure is a mere middleman or farmer, who does not cultivate the estate himself, but only collects rents from the tenants. They are of the following kinds :—*Istimrári* or perpetual leases, generally granted before the time of the Permanent Settlement and regarded as hereditary and transferable. *Mukarari* or leases in perpetuity at a fixed rent, hereditary and transferable. The grant of such a lease is generally made in consideration of a bonus paid down at the time of the grant. *Maurusi* leases, which are hereditary, but not necessarily transferable or bearing a fixed rental. *Sudibudi*, an usufructuary mortgage, under which a farm of an estate or part of it is granted to liquidate the debts due by the lessor. The lessee or creditor retains the rents, and both interest and capital Ijárás.

are liquidated thereby. *Samsudi*, a form of mortgage, in which the farm liquidates interest only. It is sometimes also called *katkina*, a term which is also used for any ordinary sub-lease. *Miādi ijārā*, an ordinary lease for a term of years. *Mānjhi jots* are another class of lease in vogue in Santāl villages, where the *mānjhi* or headman takes a settlement of the whole village from the zamīndār for a specified term at a lump rental and makes his own arrangements for rent with the other cultivators, to whom he lets out the land.

Sub-tenures.

Tenures of the second degree or sub-tenures go by the same names as tenures of the first degree, with the prefix of *dar* (under), *se* (third degree), and *chaharam* (fourth degree), *e.g.*, *dar-patni*, *se-mukarari ijārā*, etc. A *gānti jamā* is a special form of sub-tenure, in which no fixed term of years is specified in the agreement between the lessor and lessee The rent is not absolutely fixed, but liable to enhancement, while the sub-tenure-holder cannot be ejected at will and may transfer his rights.

Tenants' holdings.

Tenants' holdings fall under three classes:—(1) lands cultivated by rent-paying tenants (*jot-jamā*), (2) lands cultivated rent-free (*lākhirāj*), and (3) service lands (*chakrān*) The *jots* or rent-paying tenants' holdings, properly speaking, should all be merged in the classes recognized by the Tenancy Act, viz, tenancies at fixed rates of rent, occupancy tenancies (*dākhalī-bāsta*), tenancies held by non occupancy ryots who may or may not have a registered lease for a fixed term (*mādi-jot*) or with no limit of term. Locally, however, they are known by different names, such as *istimrāri*, *mukarari*, *maurusi* and *gānti jot*, which have the same connotation as in the case of tenures. Other holdings are:—*kherāj kharidā jot*, a holding for which a small fixed quit-rent is paid in consideration of a lump sum paid down at its creation, and *bāhar-kharidā jot*, which is the same, except that the holder was previously in possession and paid at full rates of rent until the special agreement was made. Tenants are also called *khudkāsi* or *phikāsahi* according as they reside in or out of the village in which they hold land.

Under-tenants.

Sub-tenants paying cash rents are known as *korfā* ryots, and their holdings as *korfā jot*. When rent is paid in kind, a sub-tenancy is usually known as *bhāg jot*. They include the following varieties:—*ardha-bhāg jot*, when the produce is equally divided between the sub-tenant and the superior holdings; *thikā*, when the sub-tenant contracts to supply a fixed amount of produce, taking all risks and bearing all expenses of cultivation; this is sometimes called *dhān-thikā*; *hal-krishi-krishāni*, in which the cultivator is a mere labourer who does the work and receives one-third of the outturn, the tenant supplying seed, etc.; *adhāraiā*,

jot, in which the under-tenant gets $\frac{1}{10}$ths of the produce, but does all the work of cultivation and supplies seed, etc.; *pānch ardha jot*, in which the under-tenant gets $\frac{1}{5}$ths of the produce, doing all the work and supplying seed, etc.

Rent-free holdings may be divided into two classes, viz., those of Hindu and those of Muhammadan origin. The former are as follows:— *Deiottar* and *Sibottar* are lands devoted to the support of the worship of some idol, which are held rent-free by its custodian or *sebak* as a trustee. *Brahmottar* are lands set apart for the support of Brahmans, and *Vaishnavottar* are similar lands allotted to Vaishnava devotees. *Mahattrān* are lands allotted to learned or holy men other than Brāhmans. *Khushbāsh* are lands allotted to deserving persons rent-free to induce them to live in a village. Rent-free holdings.

The following rent-free holdings are of Muhammadan origin and are known generally as *wakf*:—*Pirān* or *pirottar*, lands allotted to meet the charges connected with the maintenance of the tomb (*astānah*) of a Muhammadan saint or *pīr*. They are held in trust by a *mutwāli*, who has no power to alienate or encumber the property. *Fakirān*, lands allotted for the maintenance of an establishment for providing food and shelter for *fakirs* or wandering Musalman hermits. *Chirāghi*, lands allotted rent-free to meet the charge of procuring lamps for and illuminating mosques or the tombs of Muhammadan saints *Nazarāt*, lands bestowed rent-free with a view to meeting the charges for offerings to a *pīr's* tomb on festival days. *Khairāti*, lands of which the proceeds are intended to be spent in the bestowal of alms. *Khānābāri*, lands bestowed rent-free on worthy Muhammadans to encourage them to reside in a village. *Mullāki*, lands bestowed rent-free upon *mullās* or Musalmān religious teachers for their own maintenance, and also for the support of the *madrāsas* or Muhammadan schools over which they preside. *Azāndāri*, lands granted to the men who call Muhammadans to prayer (*azān*).

Chākrān or service holdings are holdings given rent-free as payment for service rendered by the holder to the donor. They fall under two heads, viz., lands granted for services of a public nature, and lands granted for services of a private nature, rendered to the village or the zamindár only. The first are not strictly hereditary, but are generally so in practice, as the son has a traditional claim to succeed his father. The second are generally hereditary. Neither are transferable. Service holdings.

Under the first head come *chaukīdāri chākrān* lands set aside for the maintenance of the village police, which have been recently resumed by Government, and the *daftri chākrān* lands held by

daftris, which are peculiar to this district. A number of *daftris* are supported by these grants and are employed in the Collectorate office. There were formerly also some *ghātwali* or *ghāt chaukīdāri* lands held by *ghātwāls*, whose duty it was to patrol roads, to protect travellers from robbers, and to guard the gates or entrances of the great wall of Nagar, but these have been resumed. The following hold *chākrān* lands of the second class:—the *simānādār* who watches the village boundaries to prevent encroachments; the *kalshana* or *paik*, a peon who helps the *gumāshta* to collect rents; the *purohit* or Brāhman who conducts the worship of the village idol; the *kāmār* or village blacksmith, one of whose duties is the sacrifice of goats on certain occasions; the *kumhār* or village potter, *nāpit* or barber, *māli* or gardener, and *dhobi* or washerman; the *antapahari*, a watchman who stays all day at the zamīndari *kachahri*; the *kāhār* and *adhudār*, bearers of the zamīndār, who have to be out in relays on journeys; the *jhārukash* or sweeper of the zamīndāri *kachahri*; the *rausgir*, who carries the *āmin's* chain at measurements; the *farāsh*, who looks after the zamīndāri carpets, etc.; and the *roshāngir*, who looks after the zamīndāri lamps.

Parganas. The following is a list of the *parganas*, *tappas* and *tāluks* into which the district is divided:—

Akbarshāhi *pargana.*
Alīnagar ,,
Amdahara *tāluk.*
Barbaksingh *pargana.*
Barrah *tāluk.*
Bharkunda *pargana.*
Dāri Mauleswar ,,
Dhawa ,,
Fatehpur ,,
Gokulta *chaklā.*
Haripur *tappa.*
Hukmāpur *tāluk.*
Ichhāpukur ,,
Kasbipur *pargana.*
Kashtagarh ,,
Khargrām ,,
Khatanga ,,
Khirni *tappa.*
Kuār Pratāb *pargana.*
Kutubpur *tāluk.*
Mallārpur ,,
Mazkuri *pargana.*
Nawā Nagar ,,
Nuni *tappa.*
Purandarpur *tāluk.*
Rukanpur *pargana.*
Shāh Alampur *tappa.*
Senbhūm *pargana.*
Supur *tāluk.*
Swarupsingh *pargana.*
Sabak Mayūreswar ,,
Sherpur ,,
Shāh Islāmpur ,,
Shāhbāzpur ,,
Zainujial ,,

CHAPTER XI.

GENERAL ADMINISTRATION.

ADMINISTRATIVE CHARGES AND STAFF.

For administrative purposes the district is divided into two subdivisions, viz., Surí (the Sadar subdivision) and Rámpur Hát, the former being under the direct supervision of the Collector, while Rámpur Hát is in charge of a Subdivisional Officer. At Surí the sanctioned staff under the Collector consists of three Deputy Collectors, of whom two are Magistrates of the first class, and one is vested with the powers of a Magistrate of the second or third class; in addition to these officers, there are sometimes one or two Sub-Deputy Collectors. At Rámpur Hát the Subdivisional Officer is assisted by a Sub-Deputy Collector.

REVENUE.

The revenue of the district, under the main heads, rose from Rs. 11,31,000 in 1880-81, when the income-tax had not been imposed, to Rs. 14,48,000 in 1890-91 and to Rs. 16,45,000 in 1900-01. In 1908-09 it amounted to Rs. 17,72,987, of which Rs. 10,16,024 were derived from land revenue, Rs. 3,15,975 from stamps, Rs. 2,53,106 from excise, Rs. 1,56,358 from cesses, and Rs. 31,524 from income-tax.

Land revenue.

The collections of land revenue increased from Rs. 8,03,000 in 1880-81 to Rs. 10,22,000 in 1890-91, the increase being mainly due to the transfer from Murshidábád of *pargana* Kuár Pratáb belonging to the Nashipur Ward's Estate. In 1900-01 they were Rs. 10,09,000, and in 1908-09 they aggregated Rs. 10,16,024, collected from 1,058 estates. The current land revenue demand in the latter year was Rs. 10,08,673, of which Rs. 10,05,792 were payable by 1,052 permanently-settled estates and Rs. 140 by one temporarily-settled estate, while the demand from five estates held direct by Government was Rs. 2,741. The total land revenue demand is equivalent to 33 per cent. of the gross rental of the district.